

THE
EPITOMIE
OF THE
ART of HUSBANDRY.

Comprizing all Necessary Directions for the Improvement of it, *viz.*

Plowing, Sowing, Grafting, Gardening, Ordering of Flowers, Herbs; Directions for the Use of the *ANGLE*; Ordering of Bees: Together with the Gentlemans Heroick Exercise; Discoursing of Horses, their Nature, and Use, with their Diseases and Remedies: Of Oxen, Cows, Calves, Sheep, Hogs, with the Manner of Ordering them, their Diseases and Remedies.

Of the Nature of Marle, the best Way of Planting Clover-Grafs, Hops, Saffron, Liquorice, Hemp, &c.

To which is Annexed by way of Appendix, a New Method of Planting Fruit-Trees, and Improving of an Orchard: With Directions for Taking, Ordering, Teaching, and Curing of Singing Birds, and other useful Additions.

Joseph Bagnare

By J. B. Gent.

LONDON, Printed for Benjamin Billingsley,
at the Sign of the *Printing Press*, in the *Piazza* of the
Royal Exchange, over against *Popes-Head-Alley*,
in *Cornhill*, 1685.



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London Printed for
Ben. Bicknell at
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Courteous Reader.

THIS Book of Husbandry hath been heretofore twice Printed, the good Success of the first Edition (notwithstanding it was neither Perfect nor Methodical) prevailed with the Author, to make several considerable Additions. in the Second, all of which were the Fruits of diligent Observation confirmed by Reason, and most of them approved by his own Experience ; and he understanding the Table not being

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To the Reader.

Alphabetically Printed, to give
such Disgust to some Persons,
as to make them to forbear to
Purchase a Book so Necessary
and Useful, at so small a Rate.
Therefore to Comply with
their Desires, he hath (in the
Perusing thereof) taken such
Care and Pains, that there can
be no reasonable Pretence for
further Complaint , and that
one of the Meanest Capacity
may readily find Remedies for
all Distempers Incident to the
most Useful and Necessary
Creatures ; with Instructions
for Destroying all kinds of Ver-
mine, and whatsoever is either

an

To the Reader.

an Enemy or Annoyance to
our pleasurable Profits. And
now that the Book is arrived
at a Fourth Impression, the Au-
thor (for the further Service
of the Ingenious) hath added
thereunto a small Tract con-
cerning the Taking, Breeding,
Ordering, Teaching, and
Curing, of Singing - Birds,
Exhibiting such Directions for
that Purpose, as are both Ap-
proved and Recommended by
Experience for Curiosities,
worth the Knowledge of all
such as Desire to Enjoy the
Vernal Melody of the Woods
all the Year long, at their own
Home;

To the Reader.

Home: And now he doubts not but the Book may justly bear the name of a Beneficial *Jewel*, of small Price; and questions not but the abundance of Variety, will Dispose the Reader to Peruse it often without Irksomeness, and then let his own Experience, the Mother of Truth, (when he finds those things Easie and Real, which at first seemed either Difficult or Impossible) bespeak his Approbation of these New Additions, which will be a further Incouragement to the Authour, to set forth a Second Part of such New Experiments,



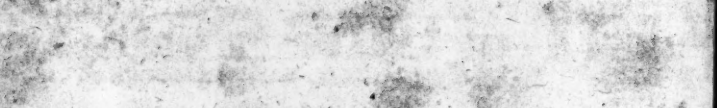
To the Reader.

ments, to serve this Age, as he
once Intended to have Reserved
as a Legacy to Posterity, for the
Benefit of the Future.

*Vive, Vale, si quid novisti rectius istis,
Candidus imperti ; si non, his utere mecum.*

THE

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THE
EPITOME
 OF THE
ART of HUSBANDRY.

With the Antient Terms thereof, as they have been Used in several Counties of *England* : Together with the Chiefest, Choiceft, and moft Experimental Observations ; as well of Former, as alfo our Modern more Refined Writers in Rustical Affairs.

Of the diverse Manner of Ploughs.

THere are several makings of Ploughs, according to the Diverse manner of Countries ; there are Ploughs of Iron, of diverse Fashions, which is occasioned from the diversity of Grounds and Soyls : Some are white Clay, some Red , some gravel Chiltern , some
B
Sand,

The Epitomy of

Sand, some Barren Earth, some Marled, and in many places Heath-ground ; so that one sort of Plough will not serve in all places, therefore it is necessary to have diverse manner of Ploughs. In *Somersetshire* about *Gloucester*, the Sharre-beam that in many places is called the Plough-head, is 4 or 5 foot long, and it is broad and thin. And that is because the Land is very tough, so as to soak the Plough into the Earth, if the Sharre-beam were not large, broad, and thin. In *Kent* they have other manner of Ploughs ; some go with wheels, as they do in diverse other manner of places ; and some will turn the Share-bred at every Lands end, and plough all one way. In *Buckinghamshire* are Ploughs made of another manner, and also other manner of Plough-Irons, the which generally are good and likely to serve in many places ; and especially if the Plough-beam and Sharre-beam were four Inches longer between the Sheath and Plough-tayl, that the Share-bred might come more slope ; for those Ploughs give out too suddenly, and therefore they are the worse to draw. In *Licester-shire*, *Lanca-shire*, *York-shire*, *Cambridge-shire*, *Lincoln-shire*, *Norfolk*, and many other Countries, the Ploughs are of diverse makings. But howsoever they are made, they are well Tempered, and go well.

To know the Names of all parts of the Plough.

TO inform those young Husbandmen that are Ignorant of the several Names of Ploughs, I shall express them as followeth : The Plough-beam is the longer Tree ; above which is a little bend. The Share-beam is the Tree underneath ; whereupon the Share

Share is set, The Plough-sheath is a thin piece of dry wood made of Oak, that is set fast in a Mortise to the Ploughs beam, and also into the Share-beam, the which is the Kere or chief band of the Plough. The Plough-tail is that the Husband-man holdeth in his hand, and in the hinder end of the Plough-beam is put a long slit made in the same tail, and not set fast, but that it may rise up and go down, and it is pinned behind, and the same Plough-tail is set fast in a Mortise in the hinder end of the share-beam. The Plough-stilt is on the right side of the Plough, whereupon the Rest is set: The Rest is a little piece of wood pinned fast upon the nether end of the stilt, and to the Share-beam into the further end. The Shelbred is a broad piece of wood fast pinned to the right side of the Sheath in the farther end, and to the utter side of the stilt in the hinder end: And the said shelbred should come over the said Sheath and Senbred an Inch, and so go past the midst of the Share with a sharp edge, to receive and turn the Earth when the Culter hath cut it. There at two long stands in every Plough in the hinder end, set aslope between the Plough-tail and the stilt, to hold out and keep the Plough abroad in the hinder end, the one is longer than the other. The Plough-foot is a little piece of wood which is crooked and set before in a Mortise in the Plough-beam, set fast with Wedges to drive up and down; and it is a stay, to order of what deepness the Plough shall go. The Plough-ear is made of three pieces of Iron, nailed fast to the right side of the Plough-beam. The meaner sort have a crooked sort of wood pinned fast to the Plough-beam. The Share is a piece of Iron, sharp before, and broad behind, a foot long, made with

a Socket to be set on the further end of the Share-beam, the Culter is a bent piece of Iron set in a Mortise in the midst of the Plough-beam fastned with Wedges on every side, and the back thereof is halt an Inch thick, and more than three Inches broad, made sharp before to cut the Earth clean ; it must be well steeled, which will cause the easier draught, and the Irons for to last the longer. The Plough-wall is a piece of hard wood, with a pin put through, set in the Plough-beam in an Augure-hole.

Of the Tempering of the Ploughs.

THe knowledge of the tempering of the Plough is very expedient and necessary for a Husbandman, that he may Plough and turn clean, and make no Rest-balks. A Rest-balk is where the Plough biteth at the point of the Culter or Share, and cutteth not the Ground clean to the Furrow that was lately Ploughed, but leaveth a little Ridge standing between, the which breeds Thistles and other weeds, All these Ploughs should have all a like manner of tempering in the Irons: Howsoever one may temper for one thing in two or three places as for deepness ; the foot is one, the setting of the Culter is another, and the third is at the Plough-tail, where are two wedges that are called Sote-wedges ; the one is in the Sote above the beam, and the other is in the said Sote under the Plough-beam ; sometimes the Husbandman will set both above, or both underneath ; but always let him take good heed, and keep one general Rule, That the hinder end of the Share-beam always touch the Earth, that it may kill the Worms, or else it goeth not truly. The tempering to go broad or narrow, is in the setting

ting of the Culter, and with the driving of the same Wedges, Fore-wedges and Hind-wedge, which should be made of dry wood, and also the setting on of his share helpeth well, and is a cunning point of Husbandry, which mendeth and pareth much ploughing; it must lean much into the Furrow, and the point must not stand too much up nor down, nor too much into the Land, nor into the Furrow. Some Ploughs have a band of Iron triangle-wise, set there as the Plough-ear should be that hath three nicks on the further side: and if the Husbandman will have his Plough to go a narrow Furrow, as a side Furrow should be, then he must set his Foot-team in the nick next to the Plough-beam; and if he will go an ordinary breadth, he setteth it in the middle nick, that is best for stirring, and if he would go a broad Furrow, he setteth it in the uttermost nick, that is the best for following, the which is a good way to keep the Brede sound tempered, but it serveth not the deepness: And some men have instead of the Plough-foot, a piece of Iron set upright in the further end of the Plough-beam, they call it a Cock, made with two or three nicks, and that serveth for deepness. The Ploughs that go with Wheels have all a straight Beam, and may be tempered in the Iron, as the other are for the breadth, but their most special temper is at the Bolster, where the Plough-beam lieth, and that serveth for deepness and for breadth. They are good on even Ground that lieth light, but they are far more costly than the other Ploughs. And though these Ploughs be well tempered for one manner of Ground, that temper will not serve for another manner of Ground; but it must rest in the discretion of the Husbandman to know when it goeth well.

Necessary things that belong to a Plough, Cart or Wain.

BEfore the Husbandman begins to Plough, he must have his Plough well ordered, and his Plough-Iron, his Oxen, or Horses, and all the Gear that belongeth to them, that is to say, Bows, Yokes, Lades, Stickings, Wretheyne Teams. And before he doth lade his Corn, he must have a Wain, a Capiock, or pair of Sleths, Wain-rope, a Pitchfork. This Wain is made of divers pieces, that will require great reparation, that is to say, the wheels, which are made of Nathes, Spokes, Tresses, and Dowls, they must be well fettered with wood or Iron, and if they are Iron-bound, they are much the better, although they are the dearer at the first, yet at length the Husbandman shall find them better cheap; for a pair of wheels Iron-bound will wear out seven or eight pair of Wheels, and go round and light after the Oxen or Horses to draw. Howsoever on Moorish Grounds and soft, the other wheels are better, because they are broader on the sole, and will not go so deep. They must have an Axle-tree clout, with eight Wain clouts of Iron, two Limpins of Iron in the Axle-tree end, two Axle-pins of Iron, or else of tough hard wood. The body of the Wain of Oak, the Staves, the nether Rathes, the over Rathes, Cross sumner, the Keys and Py-staves. And if he go with a Horse or a Mare to Plough, then must he have his Hombers, or Collers, Holms, whited Traises, Swingleletters, and Tog. Also a Cart made of Ash, because it is light and like stuff to the Wain, and also a Cart-saddle,
Back-

Back-bands and Belly-bands, and a Cart ladder behind, when the Husbandman shall carry any Corn, or other Provision. In many Countries there are Wains that have Cart-ladders both behind and before. Also the Husbandman must have an Ax, a Hatchet, a Hedging-bill, a Pin-auger, a Rest-auger, a Hail, Spade, and a Shovel: Many other things are belonging to Husbandmen which will be very costly, therefore it will be necessary for him to make his Yokes, Ox-bows, Stoles, and as many other things as he can of his Plough-gere.

Whether is better a Plough of Horses, or a Plough of Oxen.

IN some places a Horse-plough is better than an Ox-plough, that is to say, in every place where the Husbandman hath several Pastures; for the Horses may be Teddered or Tied upon their Leys, Balks, or Hades, whereas Oxen may not be kept, and it is but in few places that they are used to be teddered. And Horses will go faster than Oxen on even or light Ground, and quicker in Carriages, but they are far more costly to keep in Winter; for they must have both Hay and Corn to eat, and straw for Litter: They must be well shod on all four feet, and the Gear that they draw with is more costly than that of Oxen, and will last but for a short time. The Oxen will eat straw and a little Hay, the which is not half the cost that is required for Horses, neither are they shod. Therefore where the Husbandman hath several pastures to put his Oxen in when they come from their work, there the Ox-plough is the better. For an Ox must not endure his work to

labour all day, and then be put on the Commons, or else before the Herdmen, all night without Meat, and to go to his Labour in the Morning: But if he be put in good pasture all night, he will labour lustily all the day. Moreover Oxen will Plough in tough Clay and hilly Ground where Horses will stand still. If any Disease come to the Horse, or the Horse grows old, bruised or blind, then he will be little worth: And if any Disease come to an Ox, that he grows old, bruised, or blind, for a small matter he may be Fatted, and then he is mans meat, and as good or better than ever he was; whereas when the Horse dies, he is but Carrion.

Of Horses and Mares to Draw.

A Husbandman cannot be without Horses or Mares, or both, and that more especially if he go with a Horse-plough, he must have both, his Horses to draw, and his Mares to bring Colts to uphold his stock; the Mares must not bear Sacks, or be ridden upon, or go Journeys when they are with Foal, and especially when they have gone with Foal, twenty or twenty three weeks, for then there is great danger; for if she be then ridden upon and set up hot, she will cast her Foal, which will prove a great loss to him that owns her: For she will labour and bear when she hath Foaled, and draw when she is with Foal as well as the Horse. It is convenient for the Husbandman to know when his Mare should be Horsed. It is the common saying, that she will take Horse within nine or ten days next after she hath Foaled, but I am not altogether of that opinion; and if she so do, she will not hold there-

thereto, for that Horse doth force and drive her to it : But twenty days after it is time enough to bring her to a Horse, for otherwise she will not hold to it, except she be very eager of Horsing : And that may be known by her shape, for that will twirl about and close again many times in an hour. And then bring her to a Horse, and let her be with him a day or a night, and that is sufficient ; for it is better to keep the Horse from the Mares, than to go with them, for divers causes, and that more especially for that the Horse shall be more lusty, and more Foals may be got : But that Husbandman that hath many Mares will have too little leisure to attend them, but let them go together, and happy be lucky. Some men do hold an opinion, that put a Horse to a Mare in the beginning of the Moon, after it be prime, that he shall get a Horse-foal ; others hold the contrary, that if a Horse be put to a Mare in the old of the Moon, he should get Horse-foals. I hold that it maketh no matter whether, for I have proved it, that a Mare is most able to bear the Horse from *May-day* to *St. Bartholomews-day* ; for I have had Horses that have gone into my Mares both day and night, and at the Foaling time, I have had upon one day a Horse-foal, and on the next day and second a Mare-foal, and on the third and fourth day next after a Horse-foal, and on the next day or second a Mare-foal, and on the third or fourth day next after a Horse again, and so every week of both sorts ; whereas by their opinion or reason, I should have fourteen days together Horse-foals, and other fourteen days together Mare-foals. But of one thing I am certain, that some one Horse would get more Horse-foals than some other Horse will do ; and
like-

likewise a Mare will bear more Mare-Colts than some other Mares will do, though they are Horfed with one Horfe; neither can I give any reason why, except the Lustiness of the Natures of both of them are put to it, whether of them should have the domination. But if the Husbandman have Mares of divers colours, let him sever them in divers parcels, and let him put to his white Mare a gray horfe, and his gray Mare a white Horfe, so that he be not all white skinned about the mouth; and to a Mare of colour that hath no white upon her, a coloured Horfe that hath much more white on him, and to his coloured Mare a mean white Horfe of colour main white. And thus shall the Colts be well coloured. And if a white Horfe be put to a coloured Mare, she shall have most commonly a sandy Colt like to an Iron-gray, neither like Sire nor Dam. Howsoever, I have known many Mares that will have their Colts like the Horfe that got it, the which is against the kind of Mares; for a man had rather get one good Horfe than many Mares that are not so likely to prove well.

To carry Wood and other Necessary.

IN May when the Husbandman hath Fallowed the Ground, and set out his Sheep-fold, and carried away the Dung and Muck, if he have any Wood, Coal, or Timber to carry, or such other necessities, that must needs be done with the Cart or Wain, then is the time to do it. For then the way is like to be fair and dry, and the days long, and at that time the Husbandman hath least to do in Husban-
dry.

To carry out Dung and Muck and spread it.

IN the latter end of *April*, and the beginning of *May*, is the time for the Husbandman to carry out his Dung or Muck, and to lay it upon his Barley-ground. And where he hath Barley this year, let him Sow it with Wheat or Rye, and the next time that it is Fallowed, he shall mow all his Lands over at every second Fallow. But that Husbandman that can find the means to carry out his Dung, and doth lay it upon his Land after it be once stirred, it is much better for him than to lay it upon his Fallow, for divers causes: One is, that if it be laid upon his Fallow, all that falleth upon the hollow ridge, it shall do little good; for when it is ridged again, it lieth so deep in the Earth, that it will not be easily ploughed up again, except that when he hath spread it, he will with a Shovel or a Spade cast out all that is fallen in the ridge. And if it be laid upon the stirring, at every ploughing it shall meddle the Dung and the Earth together; the which shall cause the Corn to Grow and Increase much the better. In some places they load not their Dung till Harvest be done: This hath been a Custom on the furthest side of *Darbyshire*, called *Scarsdale*, *Halonshire*, and so Northwards towards *Tork* and *Rippon*, and that I call better than upon the Fallow, and especially for Barley. But upon the first stirring it is best for Wheat or Rye, and that the Husbandmans Dung be laid upon small heaps nigh together, and to spread it even, and to leave no Dung there as the Muck-heap stood; for the moistness of the Dung shall cause the Ground to be Rank enough:

enough : And if it be meddled with Earth, it will last the longer, and better for Barley than for wheat or Rye, because of Weeds, Horse-dung is the worst Dung that is. The Dung of all manner of Cattel that chew their Cud, is very good, and the Dung of Doves is best, but it must be laid upon the Ground very thin.

The first Stirring.

IN *June* is the time to rig up the Fallow, the which is called the first Stirring; and then let the Husbandman plough it as deep as he can for to turn the roots of the Weeds upwards, that the Sun and the dry weather may kill them; for he cannot conveniently plough his Land, and load out his Dung both upon one day with one draught of Beasts, but he may well enough Load out his Dung before Noon, and he may load Hay or Corn in the Afternoon with the same Draught, with no hurt to his Cattel, because in loading of Hay or Corn, the Cattel are always currying or biting, which they cannot do in loading of Dung, or ploughing.

The second Stirring.

IN *August*, or the beginning of *September*, is the time for the Husbandman to make his second Stirring, and most commonly it is cast down and ploughed a main Furrow not too deep, and so he turns it clean. But if it be cast, it should be water-furrowed between the Land there where the Rain uses to be, that it may be drier when the Land shall be sown; and if the Lands lie high in the Ridge, and high at the Rain, and low in the midst of the side, that

that the water may not run easily into the Rain, as I have observed from time to time in many places, then let the Husbandman set his Plough three or four Foot from the Rigg, and cast all the Rigg on both sides, and when the Rigg is cast, let him set his Plough there as he began up to the remainder of the Land, and so will the Land both be Cast and Riggged, and all at one Ploughing: And this shall cause the Land to lie round when it is sown at the next time, and thus shall the Corn be saved from drowning.

To Harrow all manner of Corn.

WHen the Lands are Ploughed, and the Corn sown, it will be convenient that they should be well harrowed, or else Crows, Pidgeons, will eat, devour, and bear away the Corns. It is the custom in many Countries to have all an Ox-harrow, the which is made of six small pieces of Timber called Harrow-Bulls, made either of Ash or Oak; they are of two yards long, and as much as the small of a mans Leg; they have shots of wood put thorow them, like Laths, and in every Bull are six sharp pieces of Iron called Harrow-tynds, set somewhat slope forward, and the former slope must be bigger than the other, because the fore-beam must be fastned to the same with a shackle or with a wyth to draw by. This Harrow is good to break the great Clots, and to make much Mould, and then the Horse-harrows to come after to make the Clots smaller, and to lay the Ground even. It is a great labour and pains for the Ox to go to harrow, it is more easie and better for them to go to Plough two days, than to Harrow one day. It is an old saying:

The

*The Ox is never wa,
Till he to the Harrow go.*

And the reason is, because the Harrow goeth by twitches, and not always after one draught. The Horse-harrow is made of five Bulls, not above an Ell of length, and not so much shotted and tinded. And when that the Corn is well covered, then it is Harrowed enough: There are Horse-harrows that have tines of wood, and those are used much about Rippon, and some other places where he may border stones, for those stones would wear the Iron too soon. And those tines are most commonly of the Ground-end of a young Ash; they are more than a foot long in the beginning, and stand as much above the Harrow as beneath. And as they wear or break, they drive them down lower, they should be made long before that they are used, that they may be dry; for then they will indure and last much better, and stick the faster. The Horses that shall draw these Harrows, must be well kept, and shod well, or else they will be soon tired, and fore beaten that they will not be able to draw; they must have Horners or Collers, Holms writhed about their Necks, Tresses to draw by, and a Swingle-tree for to hold the Tresses, and a Togewith betwixt the Swingle-tree and the Harrow. And if the Barley-ground will not break with Harrows, but be clotty, it should be beaten with Maults, and not strait down; for then the Corn will be beaten into the Earth. And if they beat the Clot on the side, it will the better break, and the Clot will be the lighter, that the Corn may come by the lighter. Some use to roll their

their Barley-ground after a showre of Rain, to make the Ground to be the evener to Mow.

To Fallow.

When the Husbandmen have sown their Pease, Beans, Barley, and Oats, and harrowed them, it will be their best time to Fallow in the latter end of *March* or *April*, for Wheat, Rye, and Barley, and let them do the best that they can to plough a broad Furrow, and deep, so that they turn it clean, and lay it flat, that it rear not an edge, the which will destroy all the Thistles and Weeds; For the deeper and the broader that it goeth, the more new Mould, and the greater Clots shall they have, and the greater Clots, the better Wheat; for the Clots keep the Wheat warm all the Winter, but at *March* they will melt and break, and fall into many small pieces; the which is a new Dunging and refreshing the Corn, and likewise there shall be but few Weeds grow upon the Fallows that are Fallowed, for the Plough goeth underneath the Roots of all manner of Weeds, and turneth the Root upwards, that they may not grow. And if the Land be Fallowed in the Winter-time, it will be far the worse, for these three causes: One is, all the Rain that falleth, shall waste the Land, and drive away the Dung, and the good Mould, that the Land shall be much the worse. Another cause is, the Rain shall beat the Land so flat, and bake it so hard together, that a dry *May* coming, it will be too hard to stir in the Month of *June*. The third cause is, the weeds shall take such Root in the stirring time, that they will not be clean turned underneath, the which shall be

be a greater hurt to the Corn, when it shall be sown, and especially of the time of weeding of the same, and for any other thing, make a deep hollow Furrow in the Ridge of the Land, and let the Husbandmen look well that the Rest balk it not; for if they do, there will be many Thistles, and then they shall not make a clean Ridge at the first stirring, and therefore it must be deeply Ploughed, or else it will not turn the Weeds clean.

How to Plough all manner of Times of the Year.

THe Ploughs being made and tempered, as I have already expressed, it will be convenient to inform the young Husbandman how he should plough all times of the Year. In the beginning of the year, after the Feast of the *Epiphany*, it will be time for the Husbandman to go to the Plough; and if he have any Leys to Fallow or sow Oats upon, first plough them that the Grass and the Moss may Rot, and plough them a deep square Furrow, and in all manner of Ploughings, let him look that his Eye, and his Hand, and his Feet do agree, and that they are always ready the one to serve the other, to turn up much Mould, and lay it flat, that it rear not up an Edge; for if it rear an Edge, the Grass and Moss will not Rot, and if he sow it with Winter-Corn, as Wheat or Rye, as much Corn as toucheth the Moss, will be drowned; for that the Moss doth keep such a wet and moisture in it self. In some Countries, if a man Plough deep, he shall pass the good Ground, and have but little Corn, but that Countrey is not fit for men to keep Husbandry upon, but to Rear and bring up Cattel and Sheep;

for

for otherwise they must go beat their Grounds with Mattocks, as they do in several places in *Cornwal*, and in some parts of *Devonshire*.

How to Plough for Pease and Beans.

First the Husbandman must take notice, which is the most Clayie Ground, let him Plough that first ; but let it lie a good space before that he sow it, because the Frost, the Rain, the Wind, and the Sun, may soon cause it to break small, to make much Mould, and to Ridge it, and to plough a square Furrow, the breadth and the deepness all one, and to lay it close to its Fellow : For the more Furrows, the more Corn serves, as hath been said, for a general Rule for all manner of Corns, which may be proved at the coming up of all manner of Corns, if the Husbandman do but stand at the Lands end, and look towards the other end, and he shall easily perceive how the Corn groweth.

How all manner of Corn should be sown, and how much most commonly on an Acre.

First of Pease and Beans. An Acre of Ground by the Statute, that is to say, sixteen Foot and an half to the Perch or Pole, four Perches to an Acre in breadth, and eleven Perches to an Acre in length, may be very well sown with two *London* Bushels of Pease, that is but two Strikes in other places ; and if there be the fourth part Beans, then will it require half a *London* Bushel more ; and if it be half Beans, it will have three *London* Bushels, and more ; if it be of Beans, it will have four *London* Bushels

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fully, and that is half a Quarter, because the Beans are great, and grow up straight, and do not spread and grow abroad as Pease do. An Acre of good Beans is worth an Acre and an half of good Pease, because there will be more Bushels : And the best property that belongeth to a good Husbandman, is to sow all manner of Corn thick enough, and especially Beans and Barley ; for commonly they are sown upon rank Grounds, and good Ground will have the burden of Corn and of Wood : And as much Ploughing and Harrowing hath an Acre of Ground, and sow thereupon but one Bushel, and another soweth four Bushels : And undoubtedly one Bushel will not give so much Corn again as the four Bushels, though the three Bushels that be sowed more, be allowed and set apart. And one Bushel and a half of white Pease or green Pease, will sow as much Ground as two Bushels of gray Pease, and that is, because they are so small, that the Husbandman need not to take so great a handful. In some Countries they begin for to sow Pease soon after *Christmas*, and in some places they sow both Pease and Beans underfurrow, and those of reason must be sowed betimes ; but generally to sow after *Candlemas*, is found to be a good season, so that they are sown towards the beginning of *March*, or thereabouts. But especially let them be sown in the old of the Moon : For the opinion of the most expert Husbandman is, that they will Cod the better, and ripen the sooner. But I speak not of Hastings, for those are to be sown before *Christmas*.

How to Sow Wheat and Rye.

ABout *Michaelmas* is the time to sow both Wheat and Rye. Wheat is most commonly sown under the Furrow, that is to say, cast it upon the Fallow, and then plough it under: And in some places they sow their Wheat upon their Pease-stubble, the which is never so good as that which is sown upon the Fallow; and that is used where they make Fallow in a Field every fourth year. In *Essex* they use to have a Youth to go in the Furrow before the Horses or Oxen, with a Bag or a Hopper full of Corn, and he taketh his hand full of Corn, by little and little casteth it in the same Furrow. This Boy, as I suppose, ought to have somewhat more than ordinary discretion: Howsoever there is much good Corn and Rye most commonly sown above and harrowed, two *London* bushels of Wheat and Rye will sow an Acre. Some Ground is good for Wheat, and some for Rye, and some for both, and upon that good Ground sow blend-Corn, that is, both Wheat and Rye, which is the surest Corn of growing, good for the Husbandmans household. And this Wheat that shall be medled with Rye, must be such Wheat as will soon be ripe, and that is flaxen Wheat, pole-ear'd Wheat, or white Wheat. There are divers kinds of Wheats: Flaxen Wheat, hath a yellow Ear, and bare, without Ayns, and is the brightest Wheat in the Bushel, and will make the whitest Bread. This Corn will wear the ground very much; the straw of it is small, but it grows very thick, and is but small Corn. Pone-ear'd Wheat hath no Ayns, 'tis thick set in the Ear,

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and it will soon fall out; 'tis greater Corn and it will make white Bread. White Wheat is like pole-ear'd wheat in the Bushel, but it hath Ayns, and the Ear is four square, and it will make white Bread, In *Essex* they call flaxen Wheat, white Wheat. Red Wheat hath a flat Ear, an Inch broad, full of Ayns, it is the greatest Corn, the broadest Blade, and the greatest Straw; it will make white Bread, tho it be the ruddiest of colour in the Bushel. English Wheat hath an Ear, it hath few or new Ayns, and it is the worst Wheat, except Peck-wheat. Peck-wheat hath a read Ear, full of Ayns, thin set, and oft-times it is flintered, that is to say, small Corn wringled and dried; it will not make white Bread, but it will grow upon cold Ground.

To Sow Barley.

EVery good Husbandman hath his Barley-Fallow well Dunged, lying ridged all the deep and cold of the Winter; the which ridging makes the Land to lie dry, and the Dinging maketh it to be mellow and rank. And if a dry Season comes before *Candlemas*, or soon after, it should be cast down, & water Furrowed between the Lands, and in the beginning of *March*, ridge it up again; sow in every Acre five *London* Bushels, or four at the least: Some years it may so happen that there is no Seasonable weather before *March*, to plough the Barley-earth. The Husbandman as soon as he hath sowed his Pease and Beans, then let him cast his Barley-earth, and shortly after ridge it again, so that it be sown before *April*: And if the time of the year be past, then sow it upon the casting. There are three kinds

kinds of Barleys, that is to say, Sprot Barly, long Ear, and Bear Barley: Sprot Barley hath most commonly a flat Ear, three quarters of an Inch broad, and three Inches long, the corners are very great and white, it is the best Barley. Long Ear, hath a flat Ear, half an Inch broad, and four Inches and more of length: But the Corn is not so great, nor so white, it will soon turn and grow to the Oats. Bear Barly or Big, should be soon sown upon dry ground; it hath an Ear four Inches long, or more, set four-square, like Peck-wheat, it hath small Corns and little Flour, and that is the worst Barley, four *London* Bushels are sufficient for an Acre: And in some Countries they do not sow their Barley till *May*, and then most commonly upon Gravel or Sandy Ground: But that Barley generally is never so good as that which is sown in *March*. For if it be very dry weather after it is sown, that Corn that lieth above, lieth dry, and hath no moisture, and that little underneath cometh up, and when Rain falls, then that spreads that lieth above, and oftentimes it is green when the other is ripe, and when it is threshed, there is much light Corn in it.

To Sow Oats.

IN *March* is the time to sow Oats, and especially upon light Ground and dry, howsoever they will grow on wetter Ground than any Corn else; for wet Ground is good for no manner of Corn. Three *London* bushels will sow an Acre. There are three sorts of Oats, that is to say, Red Oats, Black Oats, and Rough Oats. Red Oats are the best, when they are Threshed they will be Yellow in the

bushel; they are very good to make Oatmeal of, Black Oats are as great as they are, but they have not so much Flower in them, for they have a thicker Husk, nor do they make so good Oatmeal. The Rough Oats are the worst Oats, and it quitteth not the cost to sow them. They are very light, and have long Tails, whereby they will hang each on the other. These several kinds of Oats wear the Ground very much, and make it as it were quick. A young Husbandman had need to be careful how thick he soweth all manner of Corn for 2 or three years, and to observe how it cometh up, whether it be thick enough or not, and if it be too thin, let him sow thicker the next year; but if it prove well, let him hold his hands for three or four years; but if it be thin, let him Recollect with himself, whether it proceeds from the unseasonableness of the Weather, or through his thin sowing.

How to sever Pease, Beans, and Fitches.

WHen the Husbandman hath Threshed his Pease and Beans, after they be winnowed, if he Sow them or Set them, let them be well reed with Sieves, and let him sever in three parts the great from the small, by which means he shall get in every Quarter a *London* bushel, or thereabouts: For the small Corn lieth in the hollow and void places of the great Beans, and yet shall the great Beans be sold as dear. And therefore he that buyeth by whole-sale, and Retaileth, must needs be a great gainer; and he must needs be a loser that sets his Pease, Beans, and Fitches together, for then he loseth his whole-sale; but sever into three parts, there is the more gain.

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How all manner of Corn should be covered.

THe Corns being shorn and bound, and the Tythes cast out, it will be time to Cover them, Stock them, or half Throve them; but covering is the best way of all manner of white Corn: And that is to set four sheaves on one side, and four sheaves on the other side, and two sheaves above, of the greatest, bound hard nigh to the nether end, the which must be set upwards, and the top downwards, spread abroad for to cover all the other sheaves. They will stand best in wind, and save themselves best in Rain; they should be set on the ridge of the Land, and the side-sheaves to lean together in the tops, and wide at the bottom, that the wind may go thorow to dry them. Pease and Beans should be set on the ridge of the Land, four sheaves together, the tops upwards, and writhen together, and wide beneath, that they may the better wither.

To Load Corn, and Mow it.

WHen all the several Corns are dry and withered enough, then let the Husbandman load them into the Barn, and lay every several sort of Corn by it self: And if it be a wet Harvest, let him make many Mows; and if he have not housing enough, then it is better for him to lay the Pease & the Beans without upon a Reke, rather than any other Corn, and it will be better upon a Scaffold than on the Ground, but then it must be well hedged from Swine and other Cattel. Besides, the Ground will rot the bottom, whereas the Scaffold saveth both

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hedging

hedging and rotting, but they must both be well covered. And the Husbandman may set Sheep or Cattell under the same Scaffold, for it will serve him instead of a House, if it be well and strongly made.

How to know divers manner of Weeds.

IN the latter end of *May*, and the beginning of *June*, is the time for the Husbandman to weed his Corn. There are divers manner of weeds, as Thistles, Kedlocks, Docks, Cockle, Drake, Darnel, Golds, Hadods, Dog-fennel, Mathes, Tare, and divers other small weeds; but these already named, are those that are most troublesome. The Thistle is an ill weed, rough and sharp to handle, which fretteth away the Corns nigh it, and causeth the Shearers not to shear clean. Kedlocks have a leaf like Rapes, it beareth a yellow flower, and is an ill weed; it groweth in all manner of Corn, and hath small Cods, and groweth like Mustard-seed. Docks have a broad leaf, and divers high spires, and very small seed in the top. Cockle hath a long small leaf, and it will bear five or six flowers, purple colour, as broad as a Groat; the seed is round and black, and may well be suffered in Bread-corn, but not in feed, for therein is much flour. Drake is like Rye, till it begin to feed; it hath many seeds like to Fennel-seeds, and hangeth down-wards, and it may well be suffered in Bread, for there is much flour in the seed; and it is an Opinion, that it proceedeth from Rye. Darnel groweth up strait like to a high Grass; it hath long seeds on either side; there is much flour in the seed; it groweth much amongst barley, and it is said to come from small barley.

Barley. Guldes or Goldes hath a short jagged leaf that groweth half a yard high, it hath a yellow flower as broad as a Groat ; it is an ill weed, that groweth most commonly amongst Barley and Pease. Haddod hath a blew flower, and a few little leaves, it hath five or six branches flowered in the top ; it groweth commonly in the Rye upon lean Ground, it doth little hurt. Dog-fennel and Mathes, are both one, and in the coming up is like Fennel ; it beareth many white flowers, with a yellow seed, and it is the worst weed that is, except Tare : It riseth most commonly when great wet falleth shortly after the Corn is sown. Tare is the worst weed, and it doth never appear till the Month of *June*, after a great wet, or a little before ; it groweth most in Rye : It is somewhat like Fitches, but that it is much smaller ; it will grow as high as the Corn, and with the weight thereof, pull it down flat to the earth, fretting the Ears of it away : Wherefore I have seen Husbandmen Mow down the Corn and it together ; and also with sharp hooks to reap it, as they do Pease, and make it dry, and then it will be good Fodder. There are many other Weeds which do much harm, which here for brevity sake I shall omit to mention.

How to weed Corn.

THE chief Instrument to weed Corn, is a pair of Tongs made of Wood, the further end of them being nicked to hold the weed the faster. After a shower of Rain it is best weeding, for then they may be pulled up by the roots, so as never for to grow again. If it be dry weather, then must
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the Weeder have a Hook with a Socket upon a little staff a yard long; and this Hook should be well steeled, and ground sharp both behind and before; and in his other hand he should have a forked stick about a yard long, and with his forked stick he must put the weed from him, and he putteth the Hook beyond the root of the weed, and he pulleth it to him, and cutteth the weed close to the Earth, and with his Hook he taketh up the weed, and casteth it in the Rain, and if the Rain be full of Corn, it is better to stand still when it is cut and withered; but let him beware that he do not tread too much upon the Corn, and especially after that it be shot, and when that he cutteth the weed, that he cutteth not the Corn; and therefore the Hook should not exceed to be above an Inch wide. And when the weed is so short, that he cannot with his forked stick put it from him, and with the Hook put it to him, then must he set his Hook upon the weed close to the Earth, and put it from him, and so he shall cut it clean. With these two Instruments, he shall never need to stoop to his work. Dog-fennel, Goldes, Mathes, and Kedlocks, are bad to weed after this manner, they grow upon so many branches, and are so close to the Earth, and therefore they use for the most part to pull them up with their hands: But let them look well that they pull not up the Corn there-withal. As for Tare, no weeding will serve turn.

How to Mow and Shear Barley and Oats.

Barley and Oats most commonly are Mown, a Man or Woman following the Mower with a Hand-rake half a yard long, with seven or eight teeth,

teeth, in the left hand, and a Sickle in the right hand; with the Rake he gathereth as much as will make a sheaf: And then he raketh the Barley or Oats by the tops, and pulleth out as much as will make a band, and casteth the band from him on the Land, and with his Rake and his Sickle taketh up the Barley or Oats, and layeth them upon the band, and so the Barley lieth unbound three or four days until it be dry weather, and then he binds it. And when that the Barley is led away, the Land must be raked, or else there will be much Corn lost, and if the Barley or Oats lie, they must needs be shorn.

To Reap or Mow Pease or Beans.

Pease or Beans are Reaped most commonly last, or else Mown after divers manners; some with Sickles, some with Hooks, and some with Staff-hooks. In some places, they lay them on Reaps, and when that they are dry, they lay them together on heaps like Hay-cocks, and never bind them; but the best way is when the Reaps be dry to bind them, and to set them on the ridge of the Lands, three sheaves together. Mowers geld not your Beans, that is to say, to cut the Beans so high, that the nether Cod grow still on the stalk, and when they are bound, they are the readier to Load and Unload, to make a Reke, or to take from the Mow to Thresh, and so are not the Reaps.

How Rye should be Shorn.

AT the latter end of July, or the beginning of August, is the time to Shear Rye, which should

should be shorn clean, and fast bound. In some places they Mow it, the which is not so profitable a way for the Husbandman, but it is the sooner done. For when it is Mown it will not be so fast bound, and the Husbandman cannot gather it up so clean, but there will be much lost; it also taketh up more room in the Barn than shorn Corn doth: Nor will it keep or save it self from Rain or ill weather, when it standeth in the Cover, as the shorn Corn will do.

How to Shear Wheat.

WHeat should be shorn clean, and bound hard; but for a general Rule, let the Shearer take heed, that the Shearers of all manner of wheat-Corn, cast not up their hands hastily, for then all the loose Corns, and the Straws that he holdeth not in his hand, flieth over his head, and are lost; and also it will pull off the Ears, and that more especially of the Corns that are very ripe. In some places they will shear their Corns high, to the intent to Mow their stubble, either to Thatch or to burn; if they so do, they have great cause to take good heed of the Shearers: For if the Ears of the Corn crook down, or bend to the Earth, if the Shearer be not very wary, and put up the Ear, or he cut the straw, as many Ears as be under his Hook or Sickle, fall on the Earth, and are lost: And when they Mow the stubble, it is a great hindrance to the profit of the Ground. In *Somerset-shire*, about *Zelcheſter*, or *Martock*, they shear their Wheat very low, and all the Wheat-straw that they purpose to make Thatch of, they do not Thresh it, but Cut off the Ears,

Ears, and bind it in sheaves, and call it Reed, and there-with they Thatch their Houses. And if it be a new House, they thatch it under their foot, the which is the best and surest Thatching that can be of straw; for Crows, Pidgeons, and the like, shall never be able to hurt it.

How to Sow both Pease and Beans.

LEt the Husbandman Sow his Pease upon clayie Ground, and the Beans upon the Barley ground, for they require ranker ground than the Pease. Howsoever some Husbandmen are of Opinion, that the big and stiff Ground, as Clay, should be sown with big Ware, as Beans, But I am of another mind; for if a dry Summer come, his Beans will fall short. And if the Ground be very good, put the more Beans to the Pease, and they will yield the better, when they are Threshed. And if it be very rank Ground, as it is much at every Town side, where Cattel do resort, then Plough not the Land, until it be sown: For if he do, there will come up Kedlocks and other weeds. But let him sow it with Beans; for if he sow it with Pease, the Kedlocks will hurt them. And when he finds a seasonable time, let him sow both Pease and Beans, so that they are sown in the beginning of *March*. To know a seasonable time to sow, go upon the Land that is ploughed, and if it sing or cry, or make any noise under thy feet, then 'tis too wet to sow; but if it make no noise, and will bear the Horses, then sow in the Name of God. For the manner of his sowing, let him put the Pease into the Hopper, and cast a broad thong of Leather or Garth-web, of an Ell long;

long; let him fasten it to both the ends of the Hopper, and put it over his head like a Belt, and stand in the midst of the Land where the Sack lieth, the which is most conveniently for the filling of the Hopper, and let him set his left foot before, and take a handful of Pease. And when he hath taken up his right foot, then let him cast the Pease from him all abroad, and when his left foot riseth, let him take another handful, and when his right foot, then cast them from him, and so at every two paces, he shall sow a handful of Pease: Let his foot and his hand agree, and then he shall be sure for to sow even. In his casting, he must open as well his fingers as his hand: And the higher and the further that he cast his Corn, the better shall it spread, except it be a great wind. And if the Land be very good, and will break small in the ploughing, it is better to Sow, and after the Plough than to delay and lose time.

To make a Ditch.

IF the Husbandman will make his Ditch four foot broad, then it should be two foot and a half deep: And if it be five foot broad, then it must be three foot deep, and so accordingly; and if it be but five foot broad, then it must be double set, and the rather it should be fenced, and the lower Hedge will serve.

To get Sets, and set them.

IF the Husbandman have Pastures, he cannot want for Quick-setting, Ditching, or Plashing: When it is green, and cometh to be of age, let him get his Quick-sets out of some Woody parts, and let

let them be of white Thorn and Crab-tree, for they are best : Holly and Hasel are good. If he dwells in the plain Country, then he may get both Ash, Oak, and Elm, for those will increase much Wood in a short space. Let him set Oak-sets and Ash, ten or twelve foot asunder, and cut them as he doth his other Sets, and cover them over a little with Thorns, that Sheep and other Cattel eat them not. And also weed them clean in the *Midsummer* Moon, or soon after, for the Weeds, if they overgrow, will kill the Sets. But get no black Thorn for this use, for it will grow outward into the Pasture, and do much hurt to the Grass, besides the tearing of the Wooll off the Sheep. It is a good time to set Quick-sets, from the time the Leaves are fallen, until our *Lady-day* in *Lent*. The Husbandmans sandy or gravelly Ground should be first set, for it will soon dry, and then the Quick-set will take no root, except it meet with great wet ; for the Moulds will tie it, if it be Ditched in *February* or *March*, and likewise Clayie Ground, &c. Let the Husbandman make his Sets long enough, that may be set deep enough in the Earth, for then they will grow the better : Let them stand half a foot and more above the Earth, that they may spring out of many branches ; and then let him take a Line and set it where he will have his Hedge, and let him make a Trench after his Line, and pare away the Grass, there let the Quick-sets be set, and let him cast it by Line, where the Earth of the Ditch shall lie, and dig up the Moulds, and spade graff deep, and put in the Sets, and dig up more Mould and lay upon that Set, and so to go through with it till he have set up his Sets, and let them lean towards the Ditch, and a
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foot from that, let him make his Ditch; for if he make it too nigh his Sets, the water may happen to cause the Sets to fall down.

To make a Hedge.

THE Husbandman must get his stakes of heart of Oak, for those are best; Crab-tree, black Thorn, and Elder are good. Red Weathy is best in Moorish Ground; Ash, Maple, Hasel, and white Thorn will do well for a time. Let him set his stakes within two Foot and a half together, except that he have very good hedging, and lodge to bind with. And if it be double eddered, it is much the better, and of greater strength to the Hedge, and it will last much the longer; let him lay his small Trousse, or Thorns that he hedgeth withal, over the Quick-sets, that Sheep do not eat his Spring or Buds of the Sets; let his stakes be well driven that the point take the hard Earth, and when that he hath made his Hedge, and eddered it well, then let him take his Mall again, and drive down the eddering, and also his stakes immediately: For with the winding of Eddering, he shall loose his stakes, and therefore they must needs be driven new, and hardned, and that stake shall be driven the better when it is well bound.

To Plash or Plethe a Hedge.

IF the Hedge be ten or twelve years growing since it was first set, then let the Husbandman take a sharp Hatchet or Hand-bill, and cut the Sets in a plain place, close unto the Earth, the more half asunder, and bend it downwards towards the Earth, and

wrap and wind them together ; but always let him be sure that the top lie higher than the Root a good quantity, for else the sap will not run into the top kindly, but in process of time the top will die ; and then let him set a little Hedge on the back-side, and it shall need no more mending for many years after ; and if the hedge be of 20, 24, 30. years of age since it was first set, then let him winde it at the nethermost boughs, and winde them together, and then cut the Sets in a plain place a little from the Earth, the more half asunder, and let him suffer it to hang downwards rather than upwards, and that for divers causes ; then let him winde the boughs and branches thereof into the Hedge, and at every two foot, or three foot to leave one Set growing not plethed. Let the tops be growing of five foot high, or thereabouts, to stand as a stake, if there be any such, or else to set another, and to winde another that is plethed about them : And if the boughs will not lie plain in the Hedge, then cut it more than half asunder, and bind it unto the Hedge, then shall not the Husbandman need for to mend that Hedge cut in few places, twenty years after or more : And if the Hedge be old, and be great Stubs or Trees, and they in the bottom, that Beasts may go under or between the Trees, let him take a sharp Ax, and cut the Trees or Stubs that grow a foot from the Earth, or thereabouts, in a plain place, within an Inch or two Inches of the side : And let him again shave downwards, and let the top of one Tree lie over the root of another Tree, to the plethe down the boughs of the same Tree to stop the hollow places. And if the hollow and void places will not be filled and stopped, then let him scour the old Ditch,

and cast it up new, and fill with earth all the void places; and if so be these Trees will not reach in every place to make a further defence, then let him double Quick-set it, and Ditch it new in every place that is needful, and set a Hedge thereupon, and let him over-lay the Sets, to keep the Sheep and Cattel from eating them.

To mend a High-way.

First and principally, let the Husbandman look that there be no water standing in the High-way, but that it be always current and running, nor that it have no more a stop in one place than in another. And in Summer when the water is dried up, then to get Gravel, and to fill up every low place, and to make the even somewhat descending, or Current one way or other; and if there be no Gravel or Stones to get, yet fill it up with Earth in the beginning of Summer, that it may be well hardned with carriage and treading upon, and it will be well mended, if the water may pass from it: The which should be well considered of, and that more especially about *London*, whereas they are at much more cost than needs. For there they Ditch High-ways on both sides, and fill up the hollow and low place with earth, and then they cast and lay Gravel aloft: And when a great Rain or water cometh and sinketh through the Gravel, and sinketh into the Earth, the Earth swelleth and waxeth soft, and with treading, and especially with carriage, the Gravel sinketh and falleth downwards, as its nature and kind requireth, and then it is in a manner as a Quick-sand, that is difficult for any thing to go over it. But if he
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would make more Ditches in Summer time, when the water is dried up, and the Workman may see all the hollow and low places, and then to carry Gravel, and fill it up as high as the other Knoles are, then would it not swell or be turned into a Quick-sand, and every Traveller might go besides the High-way with his Carriage at his pleasure: If this course were followed, it would be both good and necessary for that purpose.

How Forks and Rakes should be made.

THe good Husbandman hath his Forks and his Rakes in a readines the Winter before, and they should be got betwixt *Michaelmas*, and *Mar-tlemas*, beyked, and set even to be upright in his hand, that they may be hard, stiff, and dry. And when that the Husbandman sitteth by the Fire, and hath nothing to do, then may he make them ready, and teeth the Rakes with dry wethy wood, and bore the holes with his Wimble both above and under, and drive the teeth upward fast, and hard, and afterwards wedge them about with dry wood of Oak, for that is hard, and will dry, and never come out. And if the Husbandman get them in Sap-time, all the baking and drying that can be shall not make them hard and stiff, but they will alwaies be plying, for they are most commonly made of Hasel and Wethy, and those are the first Trees that bloom and especially Hasel; for it beginneth to bloom as soon as the Leaf is fallen: And if the Rake be made of green wood, the head will not abide upon the steal, and the teeth will fall out when the Husbandman hath most use of them, to the hindrance

of his work, and the loss of his Hay. Let him be sure that his Rake and his Fork are upright in his hand; for if one end of the Rake, or the side of the Fork hangs downwards, they will neither be handsome, nor easie to work withal.

How to Mow Grass.

AT the latter end of *June*, it will be time for the Husbandman to begin to Mow his Meadows, for then they will be well grown: But howsoever they are grown, in *July* they must be Mown; for divers causes: One is, that it is not convenient to have Hay and Corn both at work at one time. Another is, that the younger and greener the Grass is, the softer and the sweeter it will be when it is Hay, but it will require the more withering; and the elder the Grass is, the harder and drier it is; and the harder and drier it is, the worse it is for all manner of Cattel; for the seeds will be fallen, which are in a manner a kind of Provender, and it will be the harder to eat and chew. And another cause is, that if dry weather come, it will drie and burn upon the Ground, and waste it self away. Let the Husbandman have a care that his Mower Mow clean, and hold down the hinder hand of his Sithe, that he do not indent the Grass, and Mow his Swath clean thorough to that that was last Mown before, that he leave not a man between, and especially in the common Meadow; but in the several Meadows it maketh the less charge, and that the mouldy Warp-hills be spread, and the sticks clean picked out of the Meadow in *April*, or the beginning of *May*.

To Redde and make Hay.

When the Meadows are Mowed, then they should be Redded, and laid upon the even ground ; and if the Grasse be very thick, it should be shaken with hands, or with a short Pitch fork ; for good Redding is the chief point to make good Hay, for then it shall be withered all alike, or else not : And when it is well withered on the over-side and dry, then let the Husbandman turn it clean before Noon, as soon as the Dew is gone. And if he dare trust the weather, then let him let it lie so all night, and on the next day let him turn it again, before Noon, and towards the Night make it wind-rows, and then in small Haycocks, and so to stand one night at the least and sweet, and the next fair day cast it abroad again, and turn it once or twice, and then make it into greater Hay-cocks : And to stand so one Night or more, that it may unjoyn and sweat ; for if it sweat not in the Hay-cocks, it will sweat in the Mow, and then it will be dusty, and not wholesome for the Cattel. And when it standeth in the Cocks, it is better for to Load, and more Hay may be Loaded at a Loading, and the faster it will lie ; which Hay cometh of a Grasse called Crow-foot, and groweth flat above the Earth, and beareth a yellow flower half a yard high and more ; and hath many knots towards the Coat, and it is the best Hay for Horses and Beasts, but it requires much more withering than any other Hay, or else it will be pish it self, and wax hot, and afterwards dusty. For to know when it is withered enough, make a little Rope of the same, that you think should be

most green, and twine it as hard together between your hands as you can, and so being hard twined, let one take a sharp Knife, and cut it close by your hand, and the knots will be moist, if it be not dry enough. Short Hay and Ley-Hay are good for Sheep and other Cattel.

To remove and set Trees.

IF the Husbandman will remove and set Trees, let him get as many Roots with them as he can, let him be careful that he neither break nor bruise them. If there be any Root broken or much bruised, let him cut it off hard by the Root, as it is bruised with a sharp Hatchet, otherwise the Root will die. And if it be Ash, Elm, or Oak, let him cut off all the boughs clean, and save the top whole. For if he make himself rich of Boughs, he makes himself poor of Thrift, for two causes. The Boughs cause them to shake with Wind, and to loose the Roots; also he cannot get them so cleanly, but that some of the Roots must needs be cut, and then there will not come so much sap and moisture to the Boughs, as there did before: And if the Tree be long, cut off the top two or three yards. And if it be an Apple-tree, or a Pear-tree, or such other as beareth Fruit, then let him cut away all the Water-boughs, and the small Boughs, that the Principal of them may have the more sap; and if he make a mark which side of the Tree stands towards the Sun, he may set it so again, which is so much the better.

*How to set Trees without Roots, and yet
for them to grow.*

THere are Trees that will spring Roots themselves, and those are certain Apple-trees that have knots in the Boughes or Caffes, or Wides, and such other that will grow on flavelings; and likewise Poplars and Wethies, they must be cut clean, and besides the Tree that they grow on, and the top cut clean off, eight or ten foot in length, and all the Boughs between, and be set a foot deep or more in the Earth in good Ground: There are four manner of Wethies, that is to say, white Wethy, Black, Red, and Osiere Wethy. White Wethy will grow on dry Ground, if it be set in the beginning of Winter, and will not grow on Moorish ground. Black Wethy will grow better on Moorish than on dry ground; and Red Wethy in like manner. Osiere Wethy will grow best in watry and moist Ground: And they are Trees that will soon be nourished, and they will bear much wood, and they should be Cropped every seven or eight years, or else they will die, but they must not be Cropped in Sap-time, nor no Trees else. In many places both the Lords, Free-holders, and Tenants will set such Wethies and Poplars in Moorish Grounds for to increase Wood.

Necessary things belonging to Grafting.

IT is no less necessary than profitable and pleasant for a Husbandman to be furnished with most sorts of Fruit, and therefore it will be convenient for

him to know how to Graft. Therefore he is to be acquainted with what things he must have to Graft withal. He must have a Grafting-Saw, the which should be very thin and thick Toothed; because it is thin, it will cut the narrower Kirf, and the cleaner from bruising the Bark. And therefore it is set in a Coppice piece of Iron, six Inches, for to make it stiff and big. He must also have a Grafting-knife of an Inch broad, with a thick back to cleave the stocks withal. And also a Mallet to drive his Knife and his Wedge into the Tree, and a sharp Knife to pare the Stock-head; and another sharp Knife to cut the Graft clean. And also he must have two Wedges of hard Wood or Iron; a long small one for a small stock, and a broader for a bigger stock, to open the stock when it is cloven and pared; and also good tough Clay and Moss and Bastes, and peeling of Wethy or Elm for to bind them with.

How to Graft.

HE must get Grafts of the fairest Lanfes he can find on the Tree, and let him be sure that it have a good knot or joynt, and an even; then let him take his Saw, and Saw into his Crab-tree in a fair plain place, gare it even with his Knife, and then let him cleave the stock with a great Knife and his Mallet, and set in a Wedge, and open the stock according to the thickness of his Graft; then let him take his small sharp Knife, and cut the Graft on both sides in the Joynt, but let him not pass the midst thereof; and let the inner side that shall be set into the stock, be a little thinner than the outward

ward-side, then let him proffer his Graft into the stock, till that they close so clean, that they cannot put the edge of his Knife on the other side betwixt the stock and the Graft, and let him set them so that the Tops of the Graft bend a little outward, and let him look that the wood of the Graft be set fit with the wood of the stock; and therefore he may not let the Barks meet in the inward-side: Then let him pull away his Wedge, and it will stand much faster. Let him afterwards take tough Clay like Marle, and lay it upon the stock-head, and with his finger lay it close to the Graft, and a little under the head to keep it moist, and that no wind come into the head at the cleaving; then let him take Moss, and lay thereupon for chinning of the Clay, and take a baist of white Wethy or Elm, or half a Brere, and bind the Moss, the Clay, and the Graft together; but let him be very careful that he break not the Graft, neither in the cleaving, nor in the binding; and he must set something by the Graft, that Crows, and such ravenous and unruly Birds do not light upon the Graft; for if they do, they will quickly break them.

What should be first Grafted.

Pears and Wardens should be grafted before any manner of Apples, because the Sap cometh sooner and rather into the Pear and Warden, than into the Apple-tree; and after St. Valentines Day, it is time to Graft both Pears and Wardens till March be come, and then to Graft Apples to our
 Lady-

Lady-day; and then let him Graft that he hath got of an old Apple-tree first, for that will bud before the Graft got of a young Apple-tree lately Grafted, and a Pear or Warden should be Grafted in a Pear-stock: And if he have got none, then let him Graft it in a Crab-tree-stock, and it will do well. Some men Graft them in white Thorn, and then it will be the harder, and more stony. For all manner of Apples, the Crab-tree-stock is best.

How to graft betwixt the Bark and the Tree.

THERE is another manner of Grafting, and sooner done, and of sooner growth, but it stands in great danger of the Wind when it begins to grow. Therefore the Husbandman must spare his stock, and shave the Head thereof as he did before, but let him not cleave it; then let him take his Graft, and cut it on the Joynt to the middle, and make the Tenaunt thereof half an Inch long, and a little more, all of one side, and part the Bark away a little at the point on the other side; then he must have made ready a Punch of hard wood with a Slope and a Tenaunt on the other side like to the Tenaunt on the Graft: Then let him put the Tenaunt of the Punch betwixt the Bark and the Wood of the Stock, and pull it out again, and put it in the Graft, and let him be sure that it joyn close, or else let him mend it. And this course so taken, cannot fail; for then the Sap will rise on every side, and it will spring so fast, that if it stand on plain Ground, the Wind may possibly blow it besides the Head, for it hath no Fixation in the Wood. And ths is the best remedy for the blowing off, to cut or crop away some of
the

the nethermost leaves as they grow, and this is the best way to Graft, and especially a great Tree: And then let him Clay it, and bind it as he did the other.

*To Nourish all manner of Stone-Fruits,
and Nuts.*

AS for Cherries, Damsons, Bullas, Plumbs, and the like, they may be set on the Stones, and also of the Siens growing about the Tree of the same, for they will soonest bear: Filberts and Walnuts may be set on the Nuts in the Garden, and afterwards removed and set where he will. But when they are removed, they should be set upon a good Ground or better, or else they will not like.

To fell Timber.

IF the Husbandman have Wood to Fell, I advise him for to retail it himself, that he may have an eye to his Market; and if not, if he have a Bailly or some other discreet Servant, to do it for him; and if it be small Wood, to Kidd it, and Sell it by the Hundreds, or by the Thousands; and if there be Ashes in it, to sell the small Ashes to Coopers for Garches, and the great Ashes to Wheel-rights, and the more mean and ordinary Trees to Plough-rights, the Crab-Trees to Millers, to make Coggs and Tongs. And if there be any Oaks, either great or small, to Fell them, and Peel them, and sell the Bark by it self, and afterwards to sort the Trees, the Poles by themselves, the middle sort by themselves, and the greatest by themselves, and then to sell them by Scores and Half-scores, or Hundreds, as he can,

can, and to fell it hard by the earth; for one Foot next to the Earth, is worth two foot on the top. Let him cut his Timber long enough, that he may leave none on the top; and let him sell the tops as they are, at the great, or else dress them, and sell the graat Wood by it self, and the Kid-wood by it self, and to fell the under-wood first, at any time between *Martlemas* and *Holy-rood* Day. And all the Ashes between *Martlemas* and *Candlemas*; and all Oaks as soon as they will peel, until *May* be done, and not after.

To Fell Wood for the House, or to Sell.

IF the Husbandman have any Woods to Fell, for his Household to Burn or Sell, then let him Fell the under-wood first in Winter, that his Cattel and Beasts may feed and brouse the Tops, and let him Fell no more on a day than the Beasts will eat the same day, or on the morrow after. And as soon as it is well eaten and broused, then let him bid Kid them, and set them on their ends, and that will save the bands from Rotting, and they will be the lighter to carry, and they will burn the better, and lie in less room. And when that he shall bring them home to make a stack of them, let him set the nethermost course upon the ends, and the second course flat upon the sides and the ends, the sides and the ends outward, and for the third course, let him fall on the side overthwart the other, and so to go them over, until that he have laid all up. And when that he shall have occasion for to burn them, to take the uppermost first.

To keep Spring-Wood.

IN the Winter before the Husbandman will Fell his Wood, let him make a good sure Hedge, that no manner of Cattel may get in. And immediately after it is fallen, let it be carried away before the Spring rise up; for else the Cattel that carry the wood, will devour the Spring, and when the top is eaten or broken, it is a great hindrance to the growth and goodness of the Spring; for there where it is eaten, bud and issue out many Branches, and that not so far as the first would have been. A Park is best kept, when there is neither Man, Dog, nor Four-footed Beast therein, except Deer. And so a Spring is best kept, when there is neither Man nor Four-footed-Beast within the Hedge: But if there be much grass, and the Husbandman is unwilling to lose it, then let him put in Calves newly weaned, and taken from their Dams, and also weaning Colts, and Horses not past a year of Age. Let him take his Calves away at *May*, the Colts may go longer for their eating of any wood, but its dangerous both for the Calves, Foals, and Colts for Ticks, or for being Louie, the which will kill them, if they be not well looked to. In seven years it will requite the greatest part of the cost, but at ten years it is at the best, and then the under-boughs should be cut away, and made Kid of, and the other will grow much the better and faster: But if the under-boughs are not cut away, they will die, and then they are lost, and will prove very hurtful to the Spring; for they will take away the sap that should make the Spring to grow the better.

How

How to Shred, Lop, and Crop-Trees.

IF the Husbandman hath any Trees to Shred, Lop, or Crop, for his Fire-wood, let him Crop them in Winter (as hath been said) that the Beasts may eat the brouse and the Moss of the boughs. And also the Yves, and when that they are broused and eaten, let him dress the Wood, bow it clean, and cut at every height, and rear the great Wood to the top, and Kid the small boughs, and set them an end; and if he shall not have sufficient wood, except that he head the Trees, and cut off the Tops, then let him head them three or four foot above any Timber: And if it be no Timber, but a shaken Tree, or a hedg-root full of knots, then let him head it thirty foot high, or twenty at the least; for so far it will bear plenty of wood and boughs, and much more than if it were not headed. For a Tree hath a property to grow to a certain height, and when it arriveth to that height, it is at a stand, and groweth no higher; but in breadth and in conclusion, the top will die, or decrease, and the body thrive; and if a Tree be headed, and used to be Cropped and Lopped at every twelve or sixteen years end, or thereabouts, it will bear much more wood in process of time, than if it were not Cropped, and be more profitable to the Owner.

It is the common custom with some to begin at the top of the Tree when it is to be Shred or Cropped, because each bough shall lie upon the other, when that they shall fall, so that the weight of the boughs shall cause them to be the rather cut down; but that is not the best way, for that causeth the
bough

bough to shave down the nether part, and pulleth away the bark from the body of the Tree, the which for the future, will cause the Tree to be hollow in that place, to the hurt of it. And therefore let the Husbandman begin at the nethermost bough first, with a light Ax for a hand to cut the bough, or both sides a foot, or two foot from the body of the Tree, and especially to cut it more in the nether side, than the upper side, so that the bough fall not streight down, but fall on the side, and then it shall not slave nor break any bark, and every bough will have a new Head, and bear much more wood; and let the Husbandman, except he must needs do it, avoid to Crop the Tree, and that more especially when the Wind standeth in the North or in the East; and let him beware that he Crop it not in Sap-time, for then it will dry within few days after, though it were an Oak.

Particular Secrets and Choice Rules for Setting, Watering, and Ordering of several choice Plants, Roots, Delectable Flowers, and Herbs for Gardens. The Ordering of the Summer-Garden for Pleasure and Delight, as also for the more profitable Increase of the Kitchen-Garden: Together with Directions how to Sow, and Order for the Season, whatsoever belongeth to the Summer or Kitchen-Gardens, for Plants, Herbs, Roots, Seeds, &c. As also for the Aptest time to Gather, Dry, and Preserve them.

THe Husbandman or Gardiner, who would have Plants to grow to a greater bigness than ordinary, ought to remove them after four or five Leaves are come up, and to set them again, as out of one bed bestowed into another, and the like from one border into another, prepared at a certain distance asunder, when showers of Rain have well moistened and softned the same, being such Plants that (before the setting) require to have tops of the Leaves, and ends of the Roots cut off, whereby they may the freelier grow broad or big in the Roots.

The young sets in the Garden (of pleasant delight and smell) may the Owner of the Garden also bestow in Borders in all seasons (although more commendably in the Spring-time) in breaking of the
slips

slips or branches of one years growth, for the bodies of the old stock, and in wreathing the ends about so to set them a good depth in the Earth, the Moon at that time drawing near to the Change, which will much further the Sets in their sooner taking of Root.

The Marigold, Daisie, Columbines, Primrose, Cowslip, Sweet John, Gilliflowers, Carnations, Pinks, and sundry other delectable Flowers, if the Gardiners do change those into Beds, they will increase the bigger, fairer, and doubler, the Moon at this time being considered to be increased of Light, there must be a diligence to be bestowed in the often watering of them.

The Plants (which are certain Leaves sprung up) need not to be removed into other Beds, are Spinage, Arach, Dill, Sperage, Sorrel, Chervil, Parsley, and divers others of the like sort.

The Gardiner having Digged and Prepared his Garden into Beds and Borders, I will now shew him, as briefly as I can, the best order and manner for Setting and Sowing of the chiefest Plants, Herbs, Flowers that are now most in request.

When he sets any Herbs, Flowers, or Plants, he must the next day a little moisten the Ground in the morning, and so keep it moist until they be well Rooted by watering.

The best watering which is certain (except his Ground be new made with half Dung) is to make a hole with the Dibble, a little for the Herb or Plant aslope to the Root, and so to water the Root under the Ground; for water rotteth and killeth above Ground, and whatsoever he sows, let him cover it with Earth, but as thin as he can; for if they be

too deep set or sown, most Seeds, Kirnells, and such like, will never come up.

When he sets any thing, let him be sure to make the Earth very wet, then let him overlay half a foot on dry Mould, making it so close (with beating it with the Spade) as he can, then let him set in his Herbs or Plants, thrusting the Earth very hard to the Root.

Herbs for Works may be watered; but Plants must not be wet above ground, for fear of rotting.

Let him never water but in the morning, except in *June* or *July*, and then he may water about four of the Clock in the Afternoon.

For Setting, Sowing, or Planting, it is best when the weather is warm, nor the ground neither too wet nor too dry at the top, but so moist as that it will not stick to his shoe, as after a frost. And for the time of the Moon, I hold the second day before the new Moon to be the best for most things but for Flowers, and that a little after the Change or New Moon.

The Ground which is to Sow at the Spring, must be Digg'd at *Michaelmas*, with good Dung, and then let him Trench the Digging.

The best time for Sowing is *February*, *March*, *April*; but for the Setting of Herbs, *March*, and the beginning of *April* is best: And those Herbs which spring out of the Ground in *February*, must be set in the Month.

In the middle of *April*, or in the beginning of *May* (as the Moon shall happen to be in the Wane) let him dig a Ditch about a yard deep, and lay some three quarters of a Load of Horse-dung therein, then let him cover the Dung over a foot thick with

with good Earth, laying his Seeds along on the Earth dry, and let him cover them an Inch thick with light Earth, and every night (until *May* be past, let him cover them with a wet cloth or straw, to keep away the Frost, and uncover them in the day time: And let him take notice, that when the Cucumber hath three leaves, he may then remove them to their other places. The Pomplion-seeds should be set a finger deeper in the Earth; and the Cabbages should be removed when they are a handfull high.

Parfneep-seeds may be sown in *October* (in the Wane of the Moon) but if they prove not, let him sow more seeds in *February* following.

Carrots should be sown at the latter end of *April*, or the beginning of *May*.

Turneps grow best in sandy earth, and should be sown at that time that Carrots are: But if they are required in *Lent*, let him sow them in *August*, at the Wane of the Moon.

Onions require a rank fat Ground, half Dung, he must sow them in *February*: He may also sow Onion and Lettice-seeds, and Radish-seeds mingled together in one plot for Sallets, at the same time in a hot Ground: Let him set Onions for Scallions to seed in *October*.

Garlick requireth a temperate Ground, not too rank; and it is good setting of it in *February*, and in *October*.

Leeks are for a rank Ground, and should be sown in *October*.

Radishes require such a ground as the Onions doth, sow it in *February*, and it will last all the Summer, every Month before Woodseer, in the wane of the

Moon for fear of seeding, and he shall always have them fresh and young : But after Woodseer he may sow them at any time of the Moon.

Skerrots must be set in the wane, about the latter end of *September*, or beginning of *October*. For the most part all Roots should be sown in the wane of the Moon.

Lettice sown in *August*, will live all winter ; but if they are sown in *March*, they will be so bitter that they cannot be eaten.

Parsley should be sown after the beginning of *August*, it will be fresh in the spring all the year ; it loveth the shade : The seeds of Parsley and Marjoram will lie six weeks in the Ground before they come up.

Hop may be sown in seeds in *April*, but they will not last : The Roots that are young are good to set, but the slips are best.

Marygolds may be sown in *August* for the Spring ; he may remove the Plants about two Inches long, and they will grow the bigger.

Alexander is sown in *March* or *April* ; he may remove the Roots, and they will grow the next year.

Borrage and Bugloss, are sowed in the Spring, and die that year.

Succory, or Endive are sown in *March* or *April*, remove them before the spindle, and they will be the better.

Pennyroyal, the Roots parted, or the branches set in the ground, will grow.

Mints, either the Roots set or the branches being cut in divers places, and set in the earth, being wet, will thrive.

Savory

Savory sowed in the Spring commonly dyeth: but being removed, it will live in Winter.

Time is sown or set in the Spring, both the seeds, slips, and roots of it will grow: keep it from seed-ing, and it will last three or four years.

Tansie may be sowed in *March* or *April*; the Roots being removed, will prosper.

Bloodwort may be sowed in the Spring; its roots being new set last long.

Dandelyon may be sowed in *March* or *April*, and may be ordered as the former.

Carduus-Benedictus must be sowed in the Spring, for it will dye in the Winter.

Wormwood is best to be set in the slips; it will last three or four years.

Clary is sown in the Spring; it seeds the second year and then dyes.

Fennel may be sown in the Spring and Fall; he may set the Roots, and it will continue many years.

Sweet Marjoram may be sown in *April*, but it will dye in the Winter; but if it be set, the slips will prosper.

Artichoaks proceed of young Plants taken from the old stock: The best time to plant them is in *March* or *April*, two days before the full of the Moon, yet some plant them in *August*) let him set no Plants, if he may have choice, but those that have the bottom knobs whole, neither let him pluck any Plant from the stock, till it be strong; and if the bottom knobs are pulled off and broken, it will hardly grow: And when that he would take the Plants from the stock, let him dig the Earth half a foot deep round about the stock, then let him thrust his

Thumbs betwixt the stock and the Plant, keeping the bottom whole and unbroken, &c.

Pease and Beans for the Garden must have the seed changed every year; if not, the increase will be very small, and grow less and less; for in three years the great Rounseval and great Bean will be no bigger than the wild ones, let him do what he can to his Ground, if he set or sow them which grew there before; and so likewise it is with Corn, if the seed be not changed.

If his Pease be in *February*, let him set them an inch and an half deep; but if he sow them in *March* or *April*, let him set them but an inch deep, but let him be sure that he set them in the Wane of the Moon, some six or seven dayes before the change, or else he will have a great Cod, and but small Pease; and let him set them down eight inches asunder, and he shall have Pease long, and have them often: Let him set them in several plats, some in *February*, some in *March*, and others in *April*: A Quart of Pease will serve to set a good plat of Ground. Pease and Beans will prosper well, being set under Trees; and being sown in temperate wet weather, it will be a month or longer, before they will appear.

We shall now proceed to give other expert and certain Rules for sowing, planting, and setting of the most delectable Flowers and Herbs in use, for the adorning of a Summer-Garden, or a Garden of pleasure and delight.

Roses are of several sorts and colours, as White, Red, Damask, Province, Musk, and sweet Bryar, &c. Of all the flowers in the Garden, this is the chief for beauty and sweetness: Rose Trees are commonly planted in a plat by themselves

(if

(if the Gardiners have room enough) leaving a pretty space between them for gathering. Now for him to get and set his Plants, he must do thus : In the latter end of *January*, *February*, or the beginning of *March* (at the increase of the Moon) go to some old Rose-trees (but not too old) and the Gardiner shall find long young suckers or branches, which sprang up from the Root of the Tree the last year, let him dig the hole deep, that he may cut off those suckers close to the Root (but let him take heed of wounding the tree) then let him fill up the hole again with earth very close & hard, these suckers must be young Plants for young Trees : If the suckers have too many branches, let him cut them away, also the tops of them, they will take Root the better : Then where he intends to set them, let him dig holes in good ground, at the least a foot deep, & set them a good depth, treading in the Earth hard about them, having a little Trench near them for watering, till they have taken Root. The Provost Roses will bear Root the same year that they are set in ; he may if he please, plant Strawberries, Primroses, and Violets among the Rose-trees and they will prosper very well.

Gilliflowers, Carnations, or *July*-flowers, so called, because in *July* they are in their prime and glory ; these for beauty and scent are next to the Rose, they are of several curious colours, and smell like the Cloves, and therefore of some are termed Clove-*July*-flowers : These are to be set of young slips without shanks, taken from the old Body or Root ; and when that the Gardiner sets them, let him leave one joynt (next to the leaf) at the top of the Ground, so that the Ground be above the top of the middle

joynt, for if he set any part of the Leaves within the Ground, the Gilliflowers heads will never prove. Earthen Pots are good, which have holes in or near the bottom, in which pots let him plant his Gilliflowers, and in dry weather, twice a week in the Summer-time set them in a Tub of water, for three hours or more. But let no water come to the top of the pot, but the Rain, the pot will suck up a sufficient moisture at the bottom holes: The Gardiner shall never need to take in his pots but in frosty weather.

Wall-*July*-flowers usually growing on Walls; (for they delight to grow in Lime, and Mortar) they will sometimes seem dead in the Summer, and be green, and bear flowers in the Winter; they bear store of seed, which he may sow, and set the slips: If he would have them grow upon a Wall, let him dig little holes betwixt the Bricks and Stones with an old Knife, and put in the seed.

Tulips are very beautiful Flowers, but have no scent; they adorn a Garden well, or a House; their Roots are all like Onions, which the Gardiner must set in *January*, if there be no Frost, and after they have done bearing, about *Michaelmas* let him take up the Roots out of the Ground, which will be double, and keep them dry in a Box against the next year.

Primroses, so called, as they are the first Flowers in the Spring; they are very sweet, growing both single and double: when the Roots grow too great, part them in two or three quarters, and set them again, though they be flowered, they will grow.

Cowslips are dainty sweet Flowers, they also grow both single and double; and if the Roots
grow

grow broad, you may sever them as you did the Primrose.

Hearts-ease or Pansies, they are in shape almost like a Violet : they shed their seeds, and dye, but come thick up the next Spring.

Lavender is wondrous sweet, both Leaf and Flower, good for shew ; their Roots will grow double like a Tulip, which being parted, must be new set.

Marigolds shew pleasant, and are of a reasonable scent ; you may sow them of seeds, or set young plants.

Daisies are white, red, or mingled colours, they make a pretty shew in a Garden in the Spring ; their Roots growing too thick and too broad, are to be parted and new set.

Flower-de-luces also make a great shew in a Garden ; the Roots are to be severed and new set, which being dried smell sweet.

Lillies that are red make a pleasant shew, but have no scent ; their roots grow like Garlick double, but bigger, which being parted and new set, will grow again.

White Lillies, their roots are not like the red ; their roots also are to be parted and set as the red Lilly.

Crocuses must be used and set as the Tulip ; if the Gardiner set them in his Borders ; they will make a pretty shew in the Spring.

Lupines proceed from a seed sown in *April* and *March* ; they bear a delicate flower, and the green leaves are of a strange shape ; they bear Cods like small Beans, in which are seed.

Holy-hocks are white and red ; he may sow them of seeds, or plant the root.

Piony

Piony must have the roots parted and set, the green leaves spread very broad; it beareth a great beautiful red flower: The seed of it must be sown in the spring.

French Mallows make a handsome shew; they are also to be sowed in the spring.

Saffron flowreth about *Michaelmas*; when the flowers fade, it is to be set of roots, which ought to be removed every third year about *Midsummer*.

Poppy hath a very fair flower, and of a pretty colour; the seed of it must be sowed in the Spring.

Batchelors-buttons are sowed in the Spring time, or the roots may be planted.

Sweet Sisly hath a pleasant scent; he may sow the seeds, or part the roots and set them.

Rose-Campions may likewise be sowed of seed, or the Roots planted.

Flower of the Sun groweth very high, and beareth a great yellow flower, as big as the crown of a hat, it openeth and shutteth with the Sun (like the Marigold) the seeds must be set in *February* or *March*, about a finger deep.

Strawberries are white, red, and green; but the best Strawberries are gathered out of the Woods, which have Roots well bearded: Let him set them in *January*, *February* or in *August*, three inches one from the other, in the beginning of the last Quarter of the Moon.

I shall next follow the order of the growing and setting of green sweet Herbs for the Summer-Garden.

Angelica groweth big and broad, and lasteth long;

long; you may sow it of seeds in the Spring, and the Roots may be removed after the first year. Lovage groweth much like to Angelica, and it is to be ordered in the like manner.

Anniseeds are produced of seeds sowed; they dye the first year, and so doth Coriander.

Coast-mary may be sowed of seeds, or the roots parted and set in *March*, are best.

Featherfew is to be sowed in *March* or *April*.

Oculus Christi is best to be sowed of seeds, or upon any remove of the young Plants, and new set them.

Herb-of-Grace, or Rue, the best way to set it is of slips; it is green most part of the year, and thrives best in the shade: Southern-wood is to be ordered like Rue.

Dutch-box grows green most part of the year, it is very handsom for Works and Borders; he may part the Roots and set them.

Rosemary is a tender Herb, the best setting of it is in *April*, or in the end of *March*, the Gardiner must set such as have no blossoms, and as he takes it from the Branch, but by no means let him slive it, or tear the slips, but cut them off a little from the body, leaving some few leaves behind on the piece, and then it will grow again, otherwise the body being hurt, it will never grow.

Bay-roots will proceed from the Bay-berry, being set in the Spring, or he may plant the young suckers which spring from the Root.

Hony suckles or Wood-bine, the Gardiner must get them in Woods or Hedges in the Fields, but let him dig enough to have their Roots; prune them, and plant them against the side of a House, or a Wall,

Wall, or Pole, and they will yield a most pleasant shade, or a comfortable scent: They must be taken up in *January, February,* or the beginning of the Spring.

Hedges or Quick-sets in his Gardens, may be made either with Suckers of Goosberry-trees, Currants, Privet, or Hawthorn-thorn, planted in *January* and *February*, at the Increase of the Moon.

Eglantine, or Sweet-bryar, is to be set on suckers also, and in those months also, as the former, they will grow from the Red-Hips, which they bear, but it will be long before they come to any bigness.

In *August*, four days after the change, or three days before the Full Moon, let the Gardiner cut all his Winter Herbs within an handful of the Ground, then will they get head against the Winter, and it will preserve them the better from hard weather; and in the end of *September*, let him sift the Earth, or a good Mould upon them to cover the Roots well, otherwise the Frost and Rain will bear the Earth from the Roots, that the Herbs will be in danger of being killed. And such Herbs as the Gardiner intends to keep against Winter, let him cut them often, to keep them from seeding (for seeding doth kill most Herbs) by this means they will live the better in Winter; but let him have a care that he do but seldom cut his Herbs in the wane of the Moon.

To have Flowers great, let him remove them once a year, the second or third day before the Full Moon, and so Plant them in *August*, as in *March* the weather being warm, and the ground wet, they will grow.

To dry Herbs for Broths or for Chests, he must make

make use of Plants set in the Sun in *August* in their Flowers; as Winter-savory, Time, Marjoram, Pennyroyal, Mints, Balm, Rosemary-Tops, Marigolds, Lavender, Rose-leaves, &c. Let him gather them as he dries them, when he sees the morning fair and hot, and the Herbs dry.

The best and worthiest Roots of Herbs, for the most part are to be gathered in apt and fit seasons and places, when that the Leaves are beginning to fall off, and the Fruits and Seeds already shed, so that the season be fair: For done in a Rainy day, the Roots will be rendred the weaker, when they are filled with unnecessary moisture.

The Flowers in like manner are to be gathered, as the Borrage, Bugloss, and all others of like sort, when they are wholly opened, and before they are feeble, except the Flowers of the Rose and Jesamine, which ought to be gathered for the better and longer keeping before that they are much, or rather but a little opened.

The Leaves and whole Herbs are to be gathered, when that they are come to their growth and perfection.

The Fruits, and Mellons, Cucumbers, Citrons, and Gourds, when they appear yellow, and are come to their perfect growth and perfection.

The Seeds in like condition are to be gathered when they are well ripened, and before they shed on the Earth; but those that do remain on the earth, after the Herbs are thoroughly dried, ought to be rubbed forth with the hands, and kept unto the time of sowing.

Let the Gardiner remember that seeds ought to be gathered in a clear season, and in the wane of the Moon.

And

And let the Gardiner take this for a general Rule to be observed, That always all those things that are to be gathered, as the Herbs, Flowers, Roots, Fruits, and Seeds, that they are to be gathered in a fair and dry season, and in the decrease of the Moon.

The Herbs which the Owner intends to keep, are to be pickt, and to be preserved by cleansing; let them be dried in the shade, the place being open towards the South, not moist and free from smoak and dust.

These are to be put in Leather-bags rather than Canvas, the mouths at the hanging up fast tied, or into wooden Boxes of the Box-tree, to the end that the Herbs may not lose their proper virtues.

The Flowers ought to be dried no otherwise than by the Sun at Noon, but more especially through the sharp heat of the same, together with the heat of the Air, unless it be our Rose of the Garden, which is to be preserved for a longer time, and it is to be longer dried, and more moderately in a high place, standing open to the Sun at Noon, or so that the Sun-beams enter into, but yet touch not the Rose leaves.

The best way for drying of Flowers, is to lay them in a temperate place, free from moisture, dust, and smoak, and to stir them to and fro, that they corrupt not in the drying, so as to lose neither colour, nor the natural savour.

The finer seeds are to be preserved in Leather-bags, or in Earthen Vessels, having very narrow mouths, or else in Glass-bottles, or Gally-glasses very well stopped.

But the seeds of Onions, Ghibols, and Leeks, as also of Poppy, are to be preserved in Husks and Heads.

For

For the preserving of Roots, the Gardiner ought to learn and exercise two means; the one for keeping of them fresh, and the other for the round Roots, as the Navew, Radish, Carrot, and other like sorts, for to preserve them dry.

The way and means to preserve Roots fresh, is to bury them in a Cellar, in Gravel or Sand well turned upon them, or in a Garden-ground reasonably deep digged, even as he doth for the Radish and Navew in the Earth, that he may enjoy the commodity of them for the greater part of the Winter: To preserve Roots dry, the Gardiner (after the plucking of the Roots out of the Earth) ought to wash them very clean with Conduit or Spring-water, afterwards to cut away all the small and hairy Roots; which done, to dry them in a shadowy place, free from the beams of the Sun, if so be that they are slender or thin Rin'd, as the roots of the Fennel, Succory, Parsley, Endive, Borrage, Bugloss, Sperage, and sundry such like: But if the Roots are thick of Rind, of a gross Essence, and big, then must the Gardiner lay them dry in the Sun at Noon-day, as the Roots of Gentian, the Earth-Apple, Briony, Rapontick, Aristolocia, or any others like them.

All the Field-Plants, Flowers and Roots, are longer in Nature, but in substance inferiour to the Garden-plants, &c.

Among wild Plants, those growing on the mountains, do excel the others in property.

Amongst all Plants, those are of a stronger Nature, more especially those that are of a livelier colour, better taste and favour.

The Herbs which one would use for the Kitchen, ought rather to be gathered with a Knife, somewhat
above

above the Earth, when they are shot up to their perfect growth, as the Beets, Succory, Atach, Borrage, Marigold, Colewort, Endive, Clary, Rocket, Basil, Marjoram, Mercury, Lettice, Parsley, and many others.

Thus I have, as briefly as I could, discoursed of Fruits, sundry Herbs, and Flowers, how they are properly to be gathered, and; according to their diversity, to be preserved; all which Instructions and rare Secrets, I have in part borrowed out of the Treasures of the best and most experienced Professors of Husbandry; together with what I have got through my earnest Importunity from some of my most intimate Friends. I beseech God to vouchsafe his Blessing to these my poor Endeavours.

Of Bees.

IN the keeping of Bees there is little charge, but they require good attendance to the time that they shall cast the Swarm. To which purpose it will be convenient that the Hive be set in a Garden or an Orchard, whereas they maybe kept from the North-wind, and the mouth of the Hive towards the Sun. In *June* and *July*, they do most commonly cast, and they should have some low Trees nigh to them before the Hive, that the Swarm may light upon; and when the Swarm is knit, take a Hive, and splint it within with three or four splints, that the Bees may knit their Combs unto it, and anoint the splints and sides of the Hive with a little Honey; and if he have no Honey, let him take sweet Cream, and then set a Stool or a Form nigh to the swarm, and lay a clean washed sheet upon the stool, and then
let

let him hold the small end of the Hive downwards, and shake the Bees into the Hive, and then presently set it upon the stool, and turn the Corners of the sheet over the Hive: let him leave one place open, that the Bees may go in and out; but let him do this quietly; for he must not in any wise fight or strive with them: And let him lay Nettles on the boughs where they were knit, to drive them from the place; and then let him watch them all that day, that they go not away; and at night, when all are gone up to the Hive, let him take it away, and set it where it shall stand, and take away the sheet, and let him have Clay ready tempered, to lay about it upon a board or stone where it shall stand, that no wind come in; but the board is better and warmer. Let him leave a hole open on the South-side of three Inches broad, and an Inch of height, for the Bees to enter in and out. And then let him make a covering of Wheat or Rye-straw to cover, and house the Hive above, and let him set the Hive two foot or more above the Earth upon the stakes, so that a Mouse, nor any other Beasts or Vermine may come near it. But if a Swarm be cast late in the year, they should be fed with Honey in the Winter, and laid upon a thin narrow board, or Slate, or Lead put into the Hive, and another thin board should be set before every Hives mouth, that no wind come in; and to have four or five little nicks made in the nether-side, that a Bee may come out or go in, and so fastned, that the wind blow it not down; and so ordered, that he may take it up when he will. That Hive that is fed, let the mouth of it be stopt clean, that other Bees come not in; for if they do, they will fight and kill

one another. And let him beware that no Wasps come into the Hive ; for they will kill the Bees, and eat the Hony. There is also a Bee called a Drone, which is greater than another Bee : This Drone will eat the Hony, and gather nothing, and therefore they should be killed , it is a common saying, that she hath lost her sting, and that therefore she will not labour as the others do.

How to keep Beasts and other Cattel.

IF a Husbandman would keep Cattel well to his profit, he must have several Closes and Pastures to put them in, the which should be well quick-setted, ditched, or hedged, that at his pleasure, he may sever his biggest and strongest Cattel from the weakest, and especially in Winter time, when they shall be foddered. And though a man be but a Farmer, and shall have his Farm twenty years, it is less cost for him, and more profit for him to quickset, ditch, or hedge, than to have his Cattel go before the Herdsmen ; for let the Husbandman spend in three years as much money as the keeping of his Beasts, Swine, and Sheep do cost him in the years. Then alwaies after he shall have all manner of Cattel with the tenth part of the cost ; and the beasts shall like much the better, and by this means the Herdsman shall have for every beast two pence a Quarter, or thereabouts. And the Swine-herd will have for every Swine at least a penny. Then he must have a shepherd of his own ; or else he shall never thrive : Then reckon Meat, Drink, and Wages for his Shepherd, the Herdsmans, and the Swine-herds Hire : these charges will double his Rent, or
arise

arise nigh to do so, except his Farm be above forty pounds *per Annum*. Now let us compute what these Charges will come to in three years; but let him lay out as much money in Quick-setting, ditching, and hedging, and in three years he shall be discharged for ever, and much of his labour; he and his servants may do with their own hands, and save much money. And then hath he every field in severality, and by the assent of the Lord and the Tenants, every Neighbour may exchange his Lands with the other. And then shall his Farm be twice as good in profit to the Tenant as it was before, and as much Land kept in Tillage; by this means the rich man shall not over-eat the poor man with his Cattel, and the fourth part of the Hay and Straw shall serve his Cattel better in a Pasture, than four times so much will do in a House, and less attendance, and the Cattel shall like the better.

To buy fat Cattel.

IF the Grasier shall buy fat Oxen or Kine, let him handle them, and see that they are soft on the fore-crop behind the shoulder and upon the hindermost Rib, and upon the Huckle-bone, and the Nache by the Tail: let him see that the Ox have a great Cod, and the Cow a great Navel; for then it is very likely that they are well tallowed. And let him take heed where he buyes any lean Cattel or fat, and of whom, and where it was bred: For if he buy out of a better ground than he hath of his own, that Cattel will not like with his. Also let him look that there be no manner of sickness amongst the Cattel: whether there be any Murren

or Long-saught amongst them, which may prove very dangerous ; for a beast may take a sickness ten or twelve days or more before it appears on them.

To buy lean Cattel.

That Husbandman that will thrive, must be well furnished with Cattel, he must rear and breed some Calves and Foals, or else he must be a Buyer. If he buy Oxen for the Plough, let him look that they are young & not gouty, neither broken of Hair, of Tail, or of Pizzle. If he buy Kine for the Pail, let him see that they are young, and likely to give good Milk ; and let him be sure that he feed her Calves well. And if he buy lean Oxen, let him feed and fat them, the younger they are, the better they will feed, and sooner gain flesh : (but as we have said) let him look well to the Hair, that it stare not, and that the Beast lick himself, be whole mouthed, and want no teeth. And though he have the Gout, and be broken both of Tail and Pizzle, yet will he feed. But the Gouty Ox will not be driven far. Let him also be sure that he have a broad Rib and a thick hide, that he be loose skinned, that it stick not hard nor strait to his Ribs, for then he will not feed.

To Rear Calves.

It is convenient for a Husbandman to rear Calves, and especially those that come betwixt *Candlemas* and *May* ; for at that season he may best spare Milk, and by that time the Calf shall be weaned, there

there will be Grafs enough to put him into, and at Winter he will be big enough to save himself amongst other beasts, with a little favour. The Dam of the Calf shall Bull again, and bring another by the same time of the year : but if he shall tarry till after *May* the Calf will be weak in Winter, and the Dam will not bull again, but oftentimes go barren. And if he shall rear a Calf that cometh after *Michaelmas*, it will be costly to keep the Calf all the Winter season at Hay, and the Dam at hard meat in the house, as they use in the plain Champion Countries. And a Cow shall give more milk with a little grafs and straw, lying without in a Close, than he shall do with Hay and Straw lying in a House, for the hard meat dryeth up the Milk. But he that hath no Pasture must do as he may : but yet it is better for the Husbandman to sell those Calves, than to rear them, because of the cost, and also for the profit of the Milk to his House, and the rather the Cow will take the Bull. If the Husbandman go with an Ox-plough, it is convenient that he rear two Ox-Calves, and two Cow-Calves at the least to uphold his stock ; and if he rear more, it will be the more profitable for him. It is better for the Husbandman to wean his Calves at Grafs, than at hard meat, if they went to grafs before. And that man that may have a Pasture for his Kine, and another for his Calves, and water in them both, may rear and breed good beasts with little cost. And if the Husbandman wean his Calves with Hay, it will make them big-bellied, and they are the likelier to rot when they go to grafs. In Winter they should be put in a House by themselves, and given Hay over night, and put in a good Pasture in the day

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time,

time, which will render them much the better to handle when they shall be Kine or Oxen.

To geld Calves.

IT will be a fit time to geld Calves in the old of the Moon, when they are ten or twenty dayes old; for then is least danger, and the Ox shall be the higher, and the longer of body, and the longer horned. And that may be thus proved: take two Ox-calves, both of them of one kind, one making, and both of one age, geld one of them, and let the other go forth, and be a Bull. And put them both in one pasture until they are four or five years old, and then shall you see the Ox-calf far greater every way than the Bull, There is no other cause of this but the gelding. And if he geld them not till they are a year old, there will be the more danger, and he will be less of body, and shorter horned.

Of which is the greatest loss, a Lamb, a Calf, or Foal.

IT is less damage to a Husbandman to have his Cow to cast her Calf, than an Ew to cast her Lamb; for the Calf will suck as much Milk ere it be fit to be killed, as it is worth, and of the Ew cometh no profit of the Milk, but the Lamb. Howsoever they use in some places to milk their Ews when they have weaned their Lambs, but that is a great hurt to the Ews; insomuch that it will cause them that they will not take the Ram at the time of the year, because of their leanness, but grow barren. And if a Mare cast her Foal, that is thrice so much loss.

loss. For if the Foal come of a good breed, the loss is so much the greater, and in a short time the Foal may be sold for as much money as would buy many Calves and Lambs.

What Cattel should go together in one Pasture.

BEasts alone, not Horses alone, nor Sheep alone, (except it be Sheep upon a very high Ground) will not eat Pasture even, but leave many in Fees and high grass in divers places, except it be overlaid with Cattel. Therefore we may the better take notice, that Horses and Beasts will agree well in one Pasture, for there is some manner of Grass that a Horse will eat, that a Beast will not, as the Fitches, Flashes, and low places, and all the hollow Bundes and Pipes grow therein. But Horses and Sheep will not so well agree, except it be Sheep to feed; for a sheep will go on a bare pasture, and will eat the sweetest Grass, and so will a Horse, but he would have it longer. Howsoever he will eat as close to the Earth as a sheep, but he cannot soon fill his belly. To a Hundred Beasts the Husbandman or Grasier may put in twenty Horses. If it be low ground, and if there be Grass enough, he may put in an hundred sheep, and so after the rate, the pasture more or less: and after this manner they may feed or eat the Close even, and leave but few tufts. But if it be high ground, let him put in more sheep, and less Beasts, and Horses. Milch Kine and draught Oxen will eat a Close much bearer than as many fat Kine and Oxen. A Milch Cow may have too much meat, for if she grow fat, she will the rather take Bull, and give less Milk, for the fatness

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stop-

stoppeth the Pores and the Veins that should bring the Milk to the Paps, And therefore mean Grass is best to keep her in a low estate. And if a Cow be fat, when she should Calve, then is there great hazard of her, and the Calf shall be the less; but the Husbandman cannot allow his Draught-Ox too much meat, except it be the after Mathe of a low-mown Meadow, for that will cause him to have the **Girte**, and then he is not so fit to labour. And if there be too much Grass in a Close, the Cattel shall feed so much the worse, for a good bite to the earth is sufficient; ~~for~~ if it be long, the Beasts will bite off the top and no more, for that is sweet and the other lyeth still upon the Ground, and rotteth, and no Beasts will eat it but Horses in Winter: But these Beasts, Horse, and Sheep, may not be foddered together in Winter; for then they should be severed, for else the Beasts with their Horns will gore both the Horses and the Sheep in their Bellies. It will be necessary to make standing Cratches to cast their Fodder in, and the Staves set right enough together for pulling their Fodder out too hastily for shedding. And if it be laid upon the Earth, the fourth part thereof will be lost: but if he is forced to lay it on the Earth, let him lay it every time in a new place, for the old will spoil the new.

Of Swine.

THE Husbandman that is well furnished with other Cattel, it will also be very profitable for him that he have Swine: it is a common saying, That he that hath Sheep, Swine, and Bees, sleep he or wake he, may thrive: and the saying is, because

cause that from these things the greatest profit ariseth with the least cost. Therefore let the Husbandman consider with himself how many Swine he can conveniently keep: let them be Boars and Sows all, and no Hogs. And if he be able to rear six Pigs a year, then let two of them be Boars, and two of them Sows, and so to continue after that rate: For a Boar will require as little keeping as a Hog, and is much better than a Hog, and hath more meat on him, and is ready at all times to cut in the Winter-season, and to be laid in Soufe. And a Sow before she be fit to be killed, shall bring forth as many Pigs and more, as she is worth; and her body is not the worse, but will be as good Bacon as a Hog, and asketh as little keeping but at such a time as she hath Pigs. And if his Sow hath more Pigs than he intends to rear, let him sell them, or dispose of them for his Family; but let him rear those Pigs that come about *Lent*, especially at the beginning of Summer; for they cannot be reared in Winter for cold, without great cost.

Of the Properties of Horses.

A Good Horse hath several properties, two of a Man, two of Baulon or Badger, four of a Lyon, nine of an Ox, nine of a Hare, nine of a Fox, nine of an Ass, ten of a Woman.

The two properties that a Horse hath of Man, is to have a proud heart; the second is to be bold and hardy.

The two properties that a Horse hath of a Baulon or Badger, is first to have a white Rase or Ball on the Forehead, the second to have a white Foot.

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1. The four properties that a Horse hath of a Lion, is first to have a broad Breast, the second to be stiff-Necked, the third to be wild of Countenance, the fourth to have good legs.

2. The nine properties that a Horse hath of an Ox, is first to be broad-Ribbed, the second to be low-Brawned, the third to be short-Pasturned, the fourth to have great sinews, the fifth to be wide betwixt Challes, the sixth to have a great Nose, the seventh to be big on the Chine, the eighth to be fat and well fed, the ninth to be upright standing.

3. The nine properties that a Horse hath of a Hare, is first to be stiff-eared, the second to have great eies, the third to have round eyes, the fourth to have a lean Head, the fifth to have lean Knees, the sixth to be light of Foot, the seventh to turn upon a light ground, the eighth to have short Buttocks, the ninth to have two good Fillets.

4. The nine properties that a Horse hath of a Fox, is first to be prick-Eared, the second is to be little-Eared, the third is to be round sided, the fourth is to be side-Tailed, the fifth is to be short-Legg'd, the sixth is to be black-Legg'd, the seventh is to be short-Trotting, the eighth is to be well-Coloured, the ninth is to have a little Head.

5. The nine properties that an Horse hath of an Ass, the first is to be small-Mouthed, the second is to be long-Reined, the third is to be thin-Crested, the fourth is to be strait-backed, the fifth is to have small Stones, the sixth is to have Lath-Legs, the seventh is to be round-Footed, the Eighth is to be hollow-Footed, the ninth is to have a rough Foot.

The ten properties a Horse hath of a Woman, the first is to be merry at Meat, the second is to be well Paced,

Paced, the third is to have a broad Fore-head, the fourth is to have broad Buttocks, the fifth is to be hard of ward, the sixth is to be easie to be leapt upon, the seventh is to be good at a long Journey, the eighth is to be ever busie with the Tongue, the ninth is to be chewing the Bridle, the tenth is to be active and stirring under a man.

Of the divers Diseases of Cattel, and the Remedies thereof, and first of the Murrain.

THe Murrain proceeds from a rankness of Blood; it appeareth first most commonly in the Head; for the Head will swell, and the Eies wax great, and run with water and froth at the mouth, which are certain signs that the Beast is past remedy; for he will not eat after he hath fallen sick. The best way is to tye him, and to make a deep pit hard by the place where he dyeth, and so to cast him in, and cover him close with earth, that no Dogs may come to the Carrion. For as many Beasts as smell of that Carrion, are very likely to be infected. And then let them take the skin, and carry it to the Tanners, and sell it. It hath been a common charitable custom, to take the bare Head of the same beast, and put it upon a long pole, and set it on a Hedge fast bound to a stake by the high-way-side, that every man that rideth or goeth by that way, may see and know by that sign, that there is sickness of Cattel in that Township. And the good honest Husbandmen in those parts are of opinion, that this may be a means that the Murrain may the sooner cease; when the beast is flay'd, the Murrain will appear betwixt the flesh and the skin, and it will rise up like

like a Jelly or Froth an inch deep or more ; and the best Remedy for the Murrain, is to take a small Curtain-rod, and bind it hard about the Beasts neck, and that will cause the blood to come into the Neck ; and on the other side of the Neck, there is a Vein that a man may feel with his finger, then let him take a blood-Iron, and set it streight upon the Vein, and blood him on both sides, and let him bleed the quantity of a pint, or nigh it, and then let him take away the cord, and it will stanch bleeding. And thus let him serve all his Cattel in that Close or Pasture, and by Gods blessing there shall no more of them be sick.

Of the Long-saught, with the Remedy.

THis sickness will endure long, it is perceived by its hoissing, the Beast will stand much, and eat but little, and grow very hollow and thin, and he will hoist twenty times in an hour, but few such do mend. The best Remedy is to keep the Cattel in sundry places, and as many as were in company with that Beast that first fell sick, to let them blood a little, There are many Farriers that can sever them, that is, to cut the Dew-lap before ; there is a Grass called Fetter-grass, take that Grass, and bruise it a little in a Morter, and put thereof as much as a Hens Egg into the same Dew-lap, and be careful that it fall not out.

Of Dewholm, and the hard Remedy thereof.

THis Disease comes when a hungry Beast is put into a Pasture full of rank Grass, where he will

will eat so much, that his sides will stand as high as his back-bone, and at other times the one side more than the other. When the Beast hath this disease with the swelling, he must not be driven hastily nor laboured. The substance of this distemper is but a wind, and therefore he should be softly driven, but not suffered to lie down. I have seen a Farrier take a Knife and thrust the Beast thorow the skin and the flesh, two Inches deep or more, six Inches or more through the Ridg-bone, that the wind may come out; for the wind lieth betwixt the Flesh and the great Paunch.

Of the Ryssen upon, and the Remedy thereof.

Few or no men know from whence this Disease proceedeth, but you may perceive it by swelling in the Head, and more especially by the Eies; for they will run on water, and close the beasts sight, which many times causes them to dye within an hour or two, if they are not suddenly taken in hand. The cause of this disease is, that there is a Blister risen under the Tongue, the which Blister must be slit with a Knife across: when he hath pulled out the Tongue, let him rub the Blister well with Salt, and take a Hens Egg and break it in the Beasts mouth, shell and all, and cast Salt with it, and hold up the beasts head, that all may be swallowed down into the Body. But the breaking of the Blister is the great help, let him drive the Beast a little about, and this shall cure him by the help of God.

Of the turn, and the Remedy thereof.

THere are Beasts that will turn about when they eat their meat, and will not feed: 'Tis a dangerous disease for them, by reason that they are subject to fall in Pits, Ditches, or Waters. The cause of this Distemper proceeds from a bladder in the Fore-head, between the Brain-pan and the Brains, the which must be taken out, or else the Beast shall never mend, but it will kill him. This is the Remedy, and the greatest Cure that can be on a Beast: Take the Beast and throw him down, and bind his four feet together, and with his Thumb let him thrust the Beast in the Fore-head, and where he finds the softest place, there let him take a Knife, and cut the skin three or four Inches on both sides between the Horns, and as much beneath towards the Nose, and flay it, and turn it up and down, and pin it fast with a pin. And with a Knife cut the Brain-pan two Inches broad, and three Inches long; but let him look that the Knife go no deeper than the thickness of the bone, for perishing of the brain: Let him take away the bone, and then he shall see a Bladder full of water two Inches long and more. Let him take that out, and be sure that he hurt not the Brain; and then let him lay down the skin, and sew it fast as it was before, and bind a Cloth two or three-fold upon his Fore-head, to keep it from cold and wet, for ten or twelve days together: Thus have I seen many Cured. But if the Beast be fat, and have good substantial meat upon him, it will be safer to kill him, for there will be but little loss. If the Bladder be under the Horn, it

it is past Cure. A Sheep will be troubled with the same distemper ; but I never saw any of them Cured.

Of the Warrey-breed, and the Remedy.

THere are Beasts that have this Disease in divers parts of their Body and Legs. This is the Remedy ; cast the beast down, and bind his four Legs together, and let the Farrier take a Culter, or pair of Tongs, or such other Iron, and make it glowing hot ; and if it be a long Warry-breed, let him sear it close to the body ; and if it be in the beginning, and but flat, then let him lay the hot Iron upon it, and sear it to the bare skin, and it will prove a perfect Cure.

Of the Foul, and the Remedy.

THis Disease is for the most part between the Clees, sometimes before, and sometimes behind ; it will smell, and cause the beast to halt. This is the Remedy ; cast him down, and bind his four feet together, and take a Rope hard writhen and twisted together, and put it between his Clees, and let him draw the Rope too and fro for a good space, till that he bleed well, and then let him lay to it soft-made Tar, and bind a Cloth about it, that no Mire or Gravel get between the Clees, then put him into Pasture, or let him stand still in the House, and he will suddenly mend.

Of the Gout without Remedy.

THere are Beasts that will have the Gout, and that for the most part in the hinder-Feet, which will cause him to go stiffly and halt. I never knew any man that could find such a Remedy as to cure this distemper: the only way to be taken that I know of, is to put him into good Grass, and let him feed well.

To help a Beast that pisseth Blood.

Take of Blood-wort, of Shepherds-purse, or Knot-grass, of each a like quantity, and stamp them together, then strain them with a quart of Milk of one coloured Cow, and put thereunto a little Runnet made of the same Milk, and mix therewith the Leaven of brown Bread, then strain them all together, and give it with a Horn: use this morning and evening, and it will cure him.

A Remedy for the Blain in the Tongue.

IT is a certain Bladder growing above the Root of the Tongue against the pipe, with grief at length with swelling, will choak and stop the wind: You may perceive this distemper by his gaping, and holding forth of his Tongue, and foaming at the mouth; without a speedy Remedy it will suddenly kill him. The Cure is, to cast him, and to take forth his Tongue, and slit the Bladder, or break it thereon; then wash it with a little Vinegar and Salt, and he will recover.

To help a Beast that is goared.

Take Ashes finely sifted, and mix them with the grounds of Ale and Beer, and make it as thick as Butter, and so lay it thereon, and it will heal it.

A Remedy for the Pantasie in a Beast.

THis Disease will shake him much, and make him quiver in the Flanks, and pant extreamly. For the Cure, you shall give him some Runnet, Soot, and Chamber-lye mixed together.

To kill Lice and Ticks in Cattel.

Take the Decoction of wild Olives mixed with Soot, then rub and chafe the beast all over therewith. Another; Take Bearfoot-herb, stamp it, and then strain it with Vinegar mixt with It, and so apply it.

A soveraign Remedy for the Plague in Cattel.

THis Disease proceeds from an infection of blood; it appears first (commonly) in the Head; for the beasts Head will swell, and his Eyes grow great, and run with water. When he doth once froth at the mouth, he is past Remedy. For the Cure, take of wild Carrot, called in Latine *Daucus*, or wild Parsnep, of Groundsel, of Angelica-roots, or the Root of Sea-Holm, named Eringion, with Fennel-seed, and sprinkle it with sod Wine, and fine wheaten Meal, with hot Water, mix them so together, and give your sick Cattel to drink thereof, then soon after you shall make a Drink of Cassia, Mirrh, and Frankincense, in like manner mixt with as much blood of the Sea-Tortoise, if you can get

it ; then put altogether in a quart of good old Wine, and squirt it into their Nostriils. You must administer this Medicine three days together, every day a third part. Other Preservatives are these: You must change their Lays, and divide them into many parts, far off from thence, and also separate the whole from the sick ; for one beast infected will infect all the rest in a short time : Thus when you have changed them into other parts, you must put them where you may be sure that no other beast doth feed with them.

An approved Remedy for the Tettar in Cattel.

THis Distemper is an ill-favoured Scurf or Scab growing on the skin or outward part of the beast. Some Tettars are broad, and some will grow long, and hang like a Cluster of Grapes, somewhat hard. It is supposed that they are increased through leanness and wet, or it may proceed from some venom'd Humour, or by some prick or bruise. The running or broad Tetter is cured by searing it round about with a hot Iron, then lay Tar on it, and it will take it away. Some also say that when the beast begins to be in good case, and lusty with eating of grass, that it will wear away of it self by degrees ; for he hath it for the most part in the Winter, and not in the Summer.

*An excellent Cure for an Ox or Cow that
hath a Fever.*

THis Disease is sometimes got by cold or other distempers : The signs thereof are, when his
Eyes

Eyes are hollow, and seem as if they were heavy, dropping from his head, his mouth lathering and foaming, drawing his breath very long and hard, with much pain, which occasions him sometimes to sigh. For the Cure, you must keep him a day and a night without meat or drink, then the next morning fasting you may draw a little blood from him, under his Tayl; about an hour after give him thirty small Truncheons of Coleworts sod in Sallet-Oyl and salt Fish-water, or Brine, and force him to swallow it. Do thus to him for five mornings fasting; cast before him the tender branches of Olive-trees, or the tender buds of the Vine; rub and cleanse his Lips thrice a day, and give him cold water to drink, and keep him up till he be well. The Ox also is troubled with this disease, which proceeds from his too much labour: You must let him blood on the Vein of the Forehead, or on the Vein of his Ear. Then give him green Herbs, as Lettice, and such like, that are cold, bathe all his body with white Wine give him cold water to drink, and he will recover.

An excellent Remedy for the Lungs of Cattel infected.

THE Cure is, you must pierce one of his Ears with a little Bodkin, and being so pierced, put into the Holes the burnt-Roots of Hazel-trees, then take a quantity of the Juice of Leeks, with so much Sallet Oyl, and mix it with a pint and an half of Wine, and give it him fasting. Use this nine days together, and he shall recover. This distem-

per proceeds from the Lights and Lungs of a Beast infected, which will cause him to grow lean ; till at length a common Cough will so dry his body, that it will kill him, if a sudden Remedy be not applied.

To help an Ox or any other Beast that have lost their Quide.

THE Quide by some accident or other may fall from the beast, which will cause him to mourn, and have no stomach to eat ; for that the meat which he hath already eaten, he cannot digest: To cure this distemper, take part of the Quid out of another Beasts mouth, and give it to the sick beast to swallow down, and by that means he will recover: But if he hath been long distempered, that he is much wasted and spent, then you must pull forth his Tongue, and prick the under-vein with an Awl in two or three places, till it bleed : this will cure him. *Probatum est.*

A Remedy that fails not to cure a Beast that cannot piss.

Take and bruise Carduus Benedictus steeped in white Wine, and so give it to him. Give an Ox that cannot piss, Warm Water mixed with bran; also take and stamp Sow-thistle, and heat it with Ale and Beer, and it will help him.

To cure a Cow of the Whethered.

THIS distemper falls upon her when she hath but newly calved, and hath not cast her cleanning which

which without voiding will suddenly kill her. To Cure her, take a good quantity of the Juice of Mallows, mixed with Ale and White-wine, which is excellently good to Repulse the latter birth, after the Cow hath Calved.

A Remedy for the Faintness of a Labouring Ox.

That Ox that hath Laboured hard all the Winter at plough, and at the approach of the Spring, will be very Lean, and Faint, and Lousie, insomuch that with little or no Labour, they will lie down. To Recover and make him Lusty, before his watering, you must give him a good handful of Barley in the straw, and afterwards let him drink: Which will preserve him in a strong and good case.

To recover the Leanness of a Cow

You must make a Drink, and give it her fasting, which is: Take of Long-Pepper, of Madder, of the Bark of Walnut-tree, and Turmerick, with some Bays, of each a like portion: beat them into fine powders, and put them into a pint of Ale lukewarm, and she will be in a good liking, and far better plight.

Remedies against the Worms in Cattel.

Take and stamp Garlick, and mix it with Milk or Ale, and give it to the Beast. Take a handful of Wood-sage, or Wild-sage, bruise it, and strain it with Ale, and give it: They are approved Medicines.

Against the Milting of an Ox, or any other Beast.

This distemper is so called from the beasts suddenly lying down, if there be but the least stop, though at Plough or Cart, which for the most part may proceed

ceed from some blow, stripe, or other mischance. When the beast lies down, do not disturb him, so as immediately to raise him; but gently turn him, and lay him on the other side, and he will by degrees recover himself: For the Remedy, bruise the bark of an Ash, strain it with Ale, and so give it him, and he will do well.

*An excellent Remedy for the dropping Nostrils
and watry Eyes of Cattel.*

Take Salt and Savory mixed together, and rub his Throat with it, as also his Jaws; also you may rub and chafe the said parts with Brine and Garlick mixed together, or else squirt in his Nostrils the Juyce of Pimpernel mixed with a little White-wine. These things are excellently good for the dropping Nostrils and watry Eyes of Cattel.

To Cure the Garget in the Maw.

This dangerous distemper proceeds from the beasts over-eating of Crabs, or Acorns that they find under Trees, which for the most part they swallow whole without breaking or chewing, so that they lie so in Lumps in the Maw, that they cannot digest it; so that in time it will grow and sprout in the Maw (as some fancy) till it brings them into a dying condition. The Cure is, take a good quantity of whole Mustard-seed, and mix it with wine and strong Ale, and give it to the beast, and it will set him right.

*A Remedy against the Crying and Fretting of
the Guts in Cattel, by some called
the Crowling.*

The Cure is, when the beast shall suddenly see any thing swim, especially (as some will have it) a Drake on the water, that he shall presently be Cured.

To

To cure Apostumes in Beasts.

Open the place with an Iron, and when it is cut, then you may crush out all the evil humour and matter in it, then stir and wash it with the warm brine of an Ox. Afterwards take Chirpi (so named of the French) mixed with Tar and white Oyl of Olive, plaister wise close the sore therewith: If you cannot wash the sore clean inwardly, you must melt the Tallow of an Ox or Goat, and so infuse it into the wound, and let it run down all about the bottom thereof. *Probatum est.*

To cure a Beast that is Goar'd.

If it be by some of his Fellow-cattel (to prevent some Gargal, or some Apostume that may proceed from it) you must take Ashes finely sifted, mix them with the Grounds of Ale or Beer, and make them as thick as Butter, and so lay it on the Goar; and this will certainly cure it.

The best times to be observed to stop Laxes.

You must observe when the Moon is in the sign of *Taurus*, *Virgo*, or *Capricorn*, that will be the best time for to give your beast drink to stop it. Also it is not good to purge, or to let blood, (without a great necessity) in the Change of the Moon, nor when there is an evil Aspect in one plant to another, nor in the signs of *Capricorn*, or *Aquarius*; for they are the two Houses of *Saturn* and *Mars*.

*A sudden and approved Remedy against a
Sprain or Stroke.*

Take Butter, Black-Sope, and Hemlock-herb, with a quantity of Salt and Oyl proportionable; then mix them altogether, bathe the Sprain and Stroke therewith, as hot as he can endure it, and it will cure him. But if it be in the Legs, you must

put unto them the things aforesaid, either with grounds of Beer or Ale, wash them therewith, and then wrap it about with a Hair-rope dipt in Chamber-lie, and the beast shall do well.

To cure Calves that have the Worm in their Bellies.

These Worms will annoy them much, and at length prove dangerous; they will take away their stomachs to their meat. The best Remedy is to take Lupin-pease half raw, bruise them and divide them into small pieces, make them to swallow them: Do this in the morning, and it will kill them.

An approved Remedy for Costiveness in Cattel.

A Swelling in Ox and Kine, is procured through heat, so that they cannot dung, The Cure is, to chase and drive them apace up and down: If they do not then dung, anoynt your hand with Oyl or Grease, then rake them, and take forth their dung.

An excellent Cure for a Beast that is Hide-bound.

This Disease happens to an Ox when he hath been over-laboured. For this Cure, seeth Bay-leaves in Ale, and so bathe him therewith, and immediately chase and rub him with Oyl and Wine mixed together, and so pluck and draw the skin on both his sides, till you have by degrees loosed it from his Ribs: Do this in a Sun-shiny-day, that it may the better dry and soak it.

An excellent Cure for the Garget in the throat of a Beast.

This Distemper will grievously afflict him; it commonly seizes on him through some great drought for want of water. The Cure is, you must

must cast him, then cut and flay his skin on both sides, as far as any swelling doth appear, then take the whitest sifted Ashes that you can procure, and mix them with the grounds of Stale and Piss, and stir them well together, and wash the flesh sore therewith, and it will heal it.

*A certain Remedy against the Worm in
a Beasts tayl.*

This Worm will breed like to an eating Canker, which will make the beast of ill-liking, very poor in flesh: When you offer to feel, you shall find this place somewhat soft; a little above the place on the sides of his Tayl, you must slit the skin down-right with a sharp Knife, two Inches long; then take a quantity of bruised Garlick and Salt mixed together, bind it fast to the place, and let it so remain till it do fall off it self, and the beast will do well.

*An approved Remedy to Cure Galls and
Scabs in Cattel.*

Take Garlick, and bruise it, and with it chafe and rub all the Sores. If it grow to any great Sore, then rub the place with bruised Mallows mixed with white Wine, and bind them to the place.

*A Remedy for the Galling of the Neck or
Throat with the Toak.*

If it swell but of one side, you must let him blood on the Ear on that side; but if it be chafed in the midst of the Neck, then let him blood in both his Ears, and lay unto it a Plaister made with the Marrow of an Ox, mixed with the Suet of a Buck, and then melt them together with some Pitch and Tar, and you shall heal him.

A Cure for the Itch in Cattel.

It may proceed from bad dressing, he may take it from

from his Fellows, or it may come from ill water, and Choler in the Veins. The Remedy is to wash and chafe him with his own Urine made warm, and mixt with old Salt-butter.

A Cure for the Flowing of the Gall.

This Distemper proceeds from the abundance of Choler increased by hard Travelling in hot Seasons; the Gall being filled with Choler, it overflows the whole body, causing the Yellows, or the Jaundice. For the Cure, take Gallwort-herb, which is better, and stamp a handful thereof, and then strain it with a quart of Ale, and so give it the beast to drink three mornings, and he will recover.

An approved Remedy against the Collick in Cattel.

This Distemper causeth a Girting and Rumbling of the belly, with a noise in the Guts; you shall see the diseased beast lie down, and rise presently, because his pain will not suffer him to take any ease. If it be an Ox; bruise Garlick, or bruised ~~leaves~~ ^{leaves} with a pint of Wine. The General Medicine to help Cattel, is to put into their Drink the Oyl of Nuts, or Onions boiled in sweet Wine.

An excellent Remedy against the Haw in the Eye.

This Disease is soon perceived by the Beasts holding of his head on one side, and his winking with his Eye, which will run of water. The Cure is, you must hold him fast by the head, with a strong double thread, put therewith a Needle in the midst of the upper Eye-lid, and tie it to the Horn, then take your Needle again with a long thread, and put it through the Gristle of the Haw, and with a sharp Knife cut the skin exactly round, and so pluck out the Haw; then

then lay a fine Linnen-cloth about the top of your finger ; and put your finger inwardly round about his Eye, and take out the blood, then wash it with Beer or Ale, and cast in a good quantity of Salt, wash it again, and stroke it down with your hand : Let him go, and he will do very well.

A Remedy for the Kibes in the Heel.

Cut them forth as nigh as you can, and let them bleed well ; then take Herb-Grace, and the Yolk of a new-laid Egg well beaten and stampd, and so bind it to the Grief, and it will help and heal it.

An excellent Remedy for the Sicknefs of the Lungs.

This Disease is perceived by the rising and shaking of the Dew-lap. For the Cure, take Bear-foot and beaten Garlick, wrap it in Butter, then cut his Dew-lap two Inches beneath his sticking-place, open it round with your finger, or with a stick on both sides and beneath, then put in your stuff : You must cut your Dew-lap four fingers above the bottom thereof ; then must you tie a strong thread to your stuff, to pluck it up and down as you shall see cause every third day, and it will rot the sooner. If the humour do not rot, then change your stuff, and put in new, and he shall do well.

Excellent Remedies for the Cough in Cattel.

This Distemper proceeds from cold or over-travelling of the beast, or by eating of some unwholesome thing. For the Cure, take Stitch-wort chopt small, with husked Beans bruised together : You may also take of Lentil-pease cut out of their Husks, bruise them small, and mix them with three pints of warm Water, and give it him with a Horn. If an Ox hath but of late got a Cough, you may
Cure

Cure it by a drink made with Water mixed with Barley meal.

For the Navel-gall, with the Remedy.

THis Distemper proceeds from a hurt with a Saddle, or with a Buckle of a Crupper, or from some other cause that hath hurt the midst of the Back: The Cures whereof are divers, and so they ought to be; for Medicine is to be administered according to the hurt, as it may be more or less. If it be but only Galled, take the Soot of a Chimney and Yest mixed together, and plaster it once or twice a day. Another Cure for it is, that if it be so hurt, that it swell, and is Apostumed, then Lance it on the nethermost part of the Ulcer, so that the matter may have issue downward; for if you should lance it at the top, then the corruption that remaineth will fistulate: If you find the Concavity deep, then make a Tent of Flax, and dip it in this Salve: Take of Deers Suet, of Wax, of Tar, and of Turpentine, of each three ounces, and one ounce of Rosin, mingle them together, and Tent the Wound; and if you see any dead flesh grow in it, then sprinkle the powder of Verdigrease upon it; lay upon the head of the Tent the plaster of the Yolk of an Egg, Hony, and Wheat-flour, and thus dress it morning and evening, and it will quickly be whole.

Of the Worms, with the Remedy.

THe Worms lie in the great Paunch of the Belly of the Horse; they are engendred of raw and bad humours: There are three kinds of them; the

the Worm, the Bot, the Truncheon : some of them are of a shining-colour, like a Snake, six inches in length, great in the midst, and sharp at both ends. The Horse when he is troubled with them, will lye down and wallow, which is when they feed on him; his breath will stink, and his mouth be clammy. The present Remedy is to give him a quart of Milk, and half a pint of Honey in it blood-warm; this keeps them from gnawing of him, because they will suck thereof untill they are ready to burst : then the next day give him this Drink. Take a quart of Wort, or Ale that is very strong, then take a quarter of a pound of Fern, half a pound of Savin, half a pound of Stone-crop; stamp them, and mix them together with two Spoonfuls of Brimstone, and as much Chimney soot, beaten to powder. Let them lye in steep two hours, then strain them, and give the Horse a little warm, bridle him, and let him stand six hours without meat, and question not but your Horse will be quiet and do well.

Of the Farcy, with the Remedy.

THIS is a very bad disease, but may be cured if it be taken in time, it will appear in divers parts of the body, where there will rise Pimples, and as much as half a Walnut-shell; they will follow a Vein, and will break of themselves, and as many Horses as do play with him that is sore, and gnaw off the matter that runneth out of the sore, will have the same disease within a month after, and therefore let the Grasier keep his sick Horses from the whole. This distemper proceeds from an Ulcer which is not unknown to any that have for a long time

time been Masters of Horses, and yet unknown to all, I mean as to the cause of this disease : some say it is a corruption of blood, some an outward hurt, as of Spur-galling, biting of Ticks, Hogs Lice, or such like ; some say an infirmity breed in the Breast near the Heart, in the Side-vessels near the Stones, with many evil humours congealed together, which afterwards disperse themselves into the Thighs, and sometimes into the Head, and do send forth watery humors into the Nostrils, and then it is called the running Farcy. Indeed if the true cause of a disease be known, the disease it self is easily cured. The Mange, the Leprosie, and this disease of the Farcy, are most pernicious to a Horse ; for oftentimes it falleth out, that many Horses infected therewith, (though they live, and the disease seemeth to be healed, yet) they are rendred of small or no use. For my own part, I conjecture the cause of this disease grows either from abundance of bad blood, or by a great distemper thereof, through a violent heat, changed into a sudden cold. To cure this distemper, first let him bleed on both sides of the Neck three quarters at least ; for it is most certain, that the Liver which is the fountain of blood is corrupted, and so sendeth the same into every part of the body, so as to become loathsome to behold : then give the Horse this Drink. Take a Gallon of fair Water, put into it a good handful of Rue, and a good spoonful of Hemp-seed, and a handful of the inner Rind of green Elder, bruise them in a Mortar together, and let them seeth until they are half consumed, and being cold, give it to him to drink : still continue to let him bleed a great quantity in that Vein which is nighest to the fore place, as you see
occali-

occasion. Let his dyet be thin, but very clean and sweet, then take this following approved Medicine. Of Herb-Grace a handful, of Featherfew a handful, of Chickweed of the House, a handful; of Kilweed a handful, of Herb Robert a handful, keep the residue thereof in a Pipkin close covered with the Earth, stop the mouth thereof close with Herb-Grace and Dock-leaves, and a green Turf laid upon it, no Air to come in, and every third day untie his Ears and dress it, and so continue till all the Farcy be dead; for undoubtedly at three or four dressings it will kill it.

Of a Courb, with the Remedy.

THis disease makes a Horse to halt very sore; it appeareth most upon the hinder-legs, straight under the Cambrel plate, and a little beneath the Spaven: it will be swelled and hard to cure, if it grow upon the Horse. The Cure is, take a pint of Wine-lees, a Porringer of Wheat-flour, of Cummin half an ounce, and stir them well together, which being warmed, charge the sore place therewith, renewing it once every day, for the space of three or four days; and when that the swelling is almost gone, then let them draw it with a hot Iron, and cover the burning with Pitch and Rosin melted together, and laid on warm, clap on a stocks of his own Collar, and let him rest, and come in no water for the space of twelve days. Another for the same: Take an Iron, and make it red hot, and hold it against the sore as nigh as you may, but touch not the sore, and when it is warm, then take a Fleam, and wet it in fix or seven places full of Nervil, then take a
handful

handful of Salt, and a penny weight of Verdigrease, and the White of an Egg, and put all these together, and lay it to the sore.

Of Wind-galls in Horses, with the Remedy.

VInd-galls are a disease which proceeds from too much labour; they appear above the Foot-locks, as well before as behind: they consist of a little swelling with Wind. This is a Grief many are acquainted withal. The cure is, wash the places with warm water, and shave the hair, then draw it with a hot Iron, in this manner †; that dont slit the middle Line which passeth down-right through the Wind-gall with a sharp Knife, beginning beneath, and so upwards half an inch, thrust the Jelly out, then take Pitch and Rosin molten together laid on hot, with Flocks upon it.

Of the Pains and Cratches of a Horse, with the Remedy.

THis disease causeth a Horse to halt; it proceeds chiefly from ill keeping: it appears in the pasterns; as if the skin were cut over-thwart, that a man may lay in a Wheat-straw. This distemper proceeds from a frettish waterish matter bred in the pasterns of the hinder Legs, liquid and thin humours resorting to the Joynts, whereby the Legs will be swollen, hot, and scabby. The Cure is to wash the pasterns with Beer and Butter, which being dry, clip away all the hair, saving the Footlock; then take of Turpentine, Hogs-grease, and Honey, of all alike quantity, mingle them in a Pot, and put in to them a little Bole of Armony, the Yolk of two Eggs,

Eggs, and as much Wheat-flour as will thicken them, then with a slice lay it on a cloth, make it fast to go round the pastern, and bind it fast, renewing it every day. Let him not come in any wet but stand still: some will wash it only with Gunpowder and Vinegar, which cannot but serve very well to the purpose.

Of the Ringbone, a Disease in Horses, with the Remedy.

THis is a dangerous disease; it appears before on the foot above the Hoof, as also behind: it gets into a Gristle growing about the Crouts of the feet; it will swell three inches broad, and a quarter of an inch or more of height, the hair of the beast will stare and wax thin, it will make him halt; it is hard to cure, if it be of any long growth. The Cure is to fire the sore with right lines from the Pastern to the Coffin of the Hoof, in this manner III. and let the edge of the drawing Iron be as thick as the back of a big Knife, burn it so deep that the skin may look yellow, then cover it with Pitch and Rosin molten together, and lay thereon Flocks of the Horses collar: some will eat it away with Corrosives, as the Splent.

Of the Spaven, with the Remedy thereof.

IT is a very bad distemper, which will occasion the horse to halt, and that more especially in the beginning of it; it appeareth on the hinder Legs within and against the Joynt, it will be swelled and hard. Some Horses have a thorow Spaven, as

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it appeareth both within and without ; such a kind of Spaven is hard to be cured. Our most expert Farriers will have a Spaven to be of two kinds either dry or wet ; this latter they call the blood-Spaven. The dry Spaven is cured in the manner following. First wash it with warm water, and shave off the hair as far as the swelling is, then scarifie the place, that it bleed, take of Canttharides a dozen, and of Euphorbium half a spoonful, break them into a Powder, and boil them together, with a little the Oyle de Bay, and when they are boyling hot, with feathers anoint the sore, and tye his Tayl, so that he may not wipe it, and within an hour after set him in the Stable, and tye him so that he lye not down that night (for rubbing off the Medicine) and within a day after, anoint it with Butter; and so continue for six days; then draw the sore place with an hot Iron, take a sharp one like a Bodkin, somewhat bowing at the point, and so upward betwixt the skin and the flesh, and thrust it in the nether end of the middle Line, then tent it with Turpentine and Hogs-grease molten together, and made warm, renewing it once every day, for the space of nine days; but remember that after this burning you take up the Master-Vein, which must be done in this manner: Cast the Horse upon some straw, then having found the Vein, mark well that part of the skin that covereth it, and pull that aside from the Vein with your left thumb, to the intent you may slit it with a Razor without touching the Vein, and cut no deeper than through the skin, and that longest-wise that the Vein goeth, and not above an inch, then will the skin return again to the place over the Vein: with a Cornet under-cover the Vein, and
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make it bear, thrust the Corner underneath it, and raise it up, and put a Shoe-makers thread underneath somewhat higher than the Corner standing, slit the Vein long-ways, that it may bleed, and having bled somewhat from above, then knit it with a sure knot somewhat above the slit, suffering it to bleed only from beneath a great quantity; then knit up the Vein also beneath the slit with a secure knot, then betwixt these two knots cut the Vein asunder, where it was slit, and fill the hole with Salt, then lay on this following Charge: Take half a pound of Pitch, a quarter of a pound of Rosin, a quarter of a pint of Tar, boil them together, and being warm, anoint all the insides of the Joynts, and clap on the Flocks of the Horses collar, and turn him to Grass, if it may be till he be perfectly whole and the hair grown again.

Of the wet or blood Spaven, with the Remedy.

SOME call this, as hath been said, the Thorow Spaven; it is fed by a thin flexible humour by the Master-vein. The cure is to shave off the hair and to take up the Vein on every part, and then cut the Vein asunder, and draw it with a hot Iron, charge it and put on the Flocks, and it will perfectly heal it, as I have certainly experimented.

For any dangerous Bots or Maw-worms, the Remedy.

THIS is a very evil Distemper, the Bots lying for the most part in the Horses Maw, where they will remain an Inch long, white-coloured, and red-head-

headed ; and as much as a fingers end ; they will grow quick and stick fast on the Maw-sides. This disease appeareth by the stamping or trembling of the Horse ; taken at the beginning, there are Remedies enough for them ; but let them alone too long, they will eat through the Horses Maw and kill him. For Cure, take as much Precipitate (which is Mercury calcined) as will lie gently upon a silver Two-pence, and lay it on a piece of sweet Butter almost as big as a Hens Egg, in the manner of a Pill, then chase him a little up and down, and afterwards setting him up warm, making him fast for full two hours after, and it will kill all manner of worms whatsoever ; yet in the administration you must be very careful ; for in the Precipitate there is a strong poisonous quality, therefore mix the same prescribed quantity with a little sweet Butter, as much as a Hazel-nut : Before that you lap it up in the great lump of Butter, it will be the better to allay much of the evil quality. But this I leave to your own discretion, assuring you, that there is not any thing comparable to it for the same infirmity.

Of the Serew, or Serow, with the Remedy of it.

THIS disease is like to the Splent, in manner of a Gristle, but it is a little longer and more, about the bigness of an Almond ; it groweth on the fore-leg, and lieth upon the Knee on the inner side : Some Horses have a Thorow-Serew on both sides of the Legs, that Horse must needs stumble and fall, and it will be very hard to cure him. The best Remedy is, to take an Onion and to cut out the Core, and put therein a spoonful of Hony, a quarter of

a pound of unslackt Lime, three penny-worth of Verdigrease, and roast the Onion, and bruise it, and lay it to, hot; having first cut the skin. *Probatum est.*

Of a Malender, with the Remedy.

THIS is a Disease that may be cured for a time, but with ill keeping it will come again; it appeareth on the formost Leg on the bending of the Knee behind: It is like a Scab or Scald growing in the form of Lines or streaks. Some Horses will have two of them on a Leg within an Inch together; they will make a Horse to stumble, and sometimes to fall. The Cure is, to wash it with warm water, and to shave the Scab clean away, then take a spoonful of Sope, as much Lime, and make it into a Paste, and spread as much on a clout as will cover the Sore, bind it fast, renewing every day for three days together; then anoint the same with Oyl of Roses, to cause the crust to fall away, then wash it with Urine, and strew upon it the powder of Oyster-shells. Another for the same: Take a Barreled Herring with a soft Row, and two spoonfuls of black Sope, half an ounce of Allum, and bruise them together, and lay it on the Sore three days.

Of the Splem, with the Remedy.

THIS is the least disease that is, except it be the Lampas, and many undertake to Cure it, of which very few fail. The cure of it is, to wash it with warm water, and shave off the hair, and highly to

scarifie all the fore places with the point of a Razor, so as that the blood may issue forth: Then take of Cantharadies half a spoonful, and of Euphorbium as much, beaten into a fine powder, and mingle them together with a spoonful of Oyl de Bay, and then melt them in a little Pan, stirring them well together, so that they may boil over; and being so, boyled hot, take two or three Feathers, and anoint all the fore places therewith; and let not the Horse remove from the place for two hours after. Afterwards carry him away, and tie him, so that he may not touch the Medicine with his Lips: And also let him stand without Litter that day and night, and within two or three days after, anoint the Sore with Butter for nine days, and it will cure him.

Of the Glanders, with the Remedy.

THE original cause of this Disease, is the Rheum, which being an abundant moisture, and naturally very cold, at length congealeth according to the nature of cold, and then proceedeth to Kernels, and so to Inflammations, which become so great in the end, that they seem to strangle the breath of the Horse, from whence it is said to have the Strangles, which by continuance of time either perish the Liver of the Lungs, by a continual distilling of putrified and corrupt matter. The signs are apparent to any man that hath any discerning, and the diversity of Medicines infinite. The beginning always of this disease, is taking of cold, after too much heat, the which cannot be avoided from a Horse that hath had too much feeding, and too great rest more especially if his dyet be naught; or by the use of continual

nual Travel upon a full stomach, or before his body be made clean after long rest; for the standing Pool is ever muddy. The Cure is, you must take one ounce of Fennel-Greek, boil it in water till it split, and open in two, and after that mingle it with the Decoction, and two pound of Wheat-meal, and give it the Horse to drink twice a day, and keep him fasting. *Probatum est.*

An excellent Remedy for the Haw in the Eye.

THis disease in the Horses Eye, is like a Gristle; the way to Cure it, is to take up the Haw with a little Ivory Needle, or Pen-knife, and then to cut it all away with your Sissers; for the only way to Cure it, is to cut it out.

Of the Barbs, Barbles, with the Remedy.

They are little Paps in a Horses mouth that hinder him from eating. The Cure is, to clip them away, and to wash them in Vinegar and Salt.

Of the Vives, with the Remedy of it.

THis disease is in a Horses ear, between the upper end of the Chall-bones and the Neck; it proceeds from the corruption of the blood: they are round knots between the skin and the flesh, like Tennis-balls, and if they are not timely killed, they will grow quick, eat the roots of the Horses Ears, and kill him. The Cure is, to draw them with a hot Iron right down in the midst, from the root of the Ear, so far as the tip of the Ear will reach, be-

ing pulled down, and again under the root of the Ear, with a hot Iron draw two streaks on each side, then in the midst of the first line, Lance them with a Lancelet or Razor, taking hold of the Kernels with a paire of Pinfers, so as that you may cut the Kernels out without hurting the Vein, then fill the hole full of Salt. Another Cure for the same: Take Agrimony, Hony, and Violet-leaves, stamp them together, and slit the Sinew under the Ear, and lay a Plaister thereunto for two or three days.

Of the Mourning Chine, with the Remedy.

THe cause hereof is great heat, and afterwards taking of cold; it first beginneth with a Rheum, which proceedeth to the Inflammation of the Liver and the Lungs, by the continual distilling upon them; then to the Glanders, which is the Apostumation thereof, and lastly to an Exulceration, which abruptly and untruly is called the mourning of the Chine: The signs to know this disease, are these.

1. The continual distilling of Rheum in the Head.
2. The continual Knobs between the Jaws.
3. The keeping of the hair without casting.
4. A continual running of a thick stinking matter at the Nose, like Oak water.
5. The fastning and growing of a Knob as big as a Walnut, to the inside of one of the Jaws; which if so, commit the Horses Carcass to the Crows, for he is past all help.

The Cure for such a Horse, if he be not past Cure: For the first, which is the Rheum, the Cure is what I have mentioned for the Cold in the Head. For the second Cure, I refer you to that of the Glanders. For the third, let him bleed till you see that he have fine and

and pure blood, and give him good Mashes. For the fourth, for the running of his Nose, you may add some ordinary purging Drinks, that are used for the purging of the Head. For the fifth, if you find no amendment but a Knob grown to his Jaw, then you must give him a Purge with Pills; and if these means will not help him (though he were the best Horse in the World) he is remediless.

Of the broken Wind, with the Remedy.

THe cause of this dangerous Disease, hath been but guessed at, not truly discovered by any, as not being well understood, and therefore accounted of most Horse-men Incurable. I do intend to use my best Endeavours to Unfold and Explain it: To which purpose, I will divide the same into three Kinds, every one of which may be truly termed a Broken-wind, because the breath being drawn very short and thick (contrary to the Original Institution or Creation, the which is long, cold, and quiet, for so every Creature is by Nature, but when any accident of violence of the body is used in any of them or a distemper) the signs thereof will quickly be visible, and then every mans experience telleth him evidently, that he panteth and fetcheth breath very short and thick; I therefore will begin with the Cause thereof, the which rightly understood, the Effects cannot be hid. Now the Causes why a Horse draws his breath very short, are these; as Sickness, great Fulness, violent Exercise: But the reason of the Cause is; for that the Heart being the only hottest part of the Body, from whence the Arteries or Veins do carry the heat thereof to every part

part of the Body (and therefore it is truly said to be the Chariot of Life) when the same by sickness, or violence of exercise is choaked, or as it were smothered with too great heat, then do the Lights, being the Bellows to draw breath, according to that Office that Nature ordained them unto, presently labour with all violence to draw it, and cool and comfort the Heart, and so consequently all the members and parts of the body, to fill all the empty corners with Air, which naturally and in predominant qualities is moist; and when they have drawn sufficient breath, the dryness and heat by the moistness of the Air is quenched, which being so, then doth the Creature draw breath leisurely and coldly, and not before: but so long as the Heart is oppressed by the violent heat of sickness, or by great Fulness, or violent Exercise, the Caves, Pipes, and passages for the breath, are almost stopped and choaked up; then do the Lungs labour extream thick to preserve the Life of the creature which is the heart, and therefore it is said to be the first thing that liveth, and the last that dieth: So that all things which hinder and stop the passages of the breath, breaking the natural course thereof, are the only causes of a Broken-wind. So likewise the Cure of the Broken-wind must be by removing of the stoppings of the Air, and then the Lungs will perfectly perform their Office, and the Creature will be freed from the disease. The differences of Broken-wind both in cause and effect, are divers and yet may be termed Broken; namely, the shortness of breath, the Pur-sick, and Broken-winded.

1. As touching the shortness of breath, it may proceed from some gross and tough humours, cleaving

to the hollow places of the Lungs, stopping the Wind-pipes, so that the horse cannot easily draw his breath ; and the sign thereof is his coughing often, daily, and vehemently, without voiding at the Nose or the Mouth. 2. It may come by hasty running after drinking, or upon a full stomach, or dissolution of humours, descending into his Throat or Lungs, by reason of some violent heat dissolving the same. And the signs thereof, are continually panting, sending the same forth very hot at his Nose, in a wheeasing manner, his Flanks beating so thick, that he cannot fetch breath, but by holding his Neck right out and straight : and this may be truly called a Broken Wind. The Cure is, to take a close earthen Pot, and put therein three pints of strong Wine-vinegar, and some new-laid Eggs, with the shells unbroken, and four Garlick-heads, clean peeled and bruised ; then cover the Pot-close, and set it in some warm Dunghill, and there let it stand a whole night, and the next morning take out the Eggs, but break them not, then strain the Garlick and Vinegar through a clean cloth, put thereunto a quarter of Honey, half a quarter of Sugar-candy, two ounces of Liquorish, two ounces of Anniseeds beaten into a fine powder. The horse having fasted all night, in the morning open his mouth, and put out his Tongue, and put one Egg into his Throat, and then let go his Tongue, so that he may swallow it down, then pour after it a horn of the said Drink, being luke-warm, and so all the Eggs in that manner, and all the Drink being spent, bridle him, and stop him, and cloath him very warm, and let him stand four hours, then unbit him ; and if it be in Winter ; give him Wheat-straw but no Hay, and
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if in the Summer-time, give him Graſs, and for ſome days together Maſhes to drink, with ſome Sallet-Oyl or Hogs-greaſe in them, and the Horſe will do well ; and in a few days be fit for Exerciſe.

*Of the Gravelling of the Horſe, with the
Remedy.*

IT is a hurt will make the Horſe to halt, it proceeds from Gravel and little ſtones that get in between the Slough and the Heart of the Foot ; the cure is, to pare his Hoof, and get out the Gravel, and then ſtop him with Turpentine and Hogs-greaſe molten hot, and ſtopt with Tow : have a care that he come not out of the Stable till he be well.

Of the Lampas, with the Remedy.

THis diſeaſe is in the Mouth ; it is the eaſieſt to be cured of all thoſe that diſturb the Horſe : as it is only but a thick ſkin full of blood that hangs over his Teeth, that he cannot eat ; ſo there needs no more to be done, but to let out the blood, and then take away the ſkin, and the Horſe will be cured.

*Of the Accloyed, or Cloying the Foot with the prick
of a Nail, with the Remedy.*

IT is a hurt that cometh from ill ſhooring, when a Smith drives a Nail into the quick, the which will make the Horſe to halt : The cure is, to take Turpentine, Wax, and Sheeps Suet molten together, and poured into it.

Of the Colts-Evil, with the Remedy.

THis is a very bad disease, which proceedeth from the rankness of water and blood: it appeareth in his Scote, for they will swell great, and will not be hard. This distemper taken at the first, is thus cured; wash the Sheath clean with lukewarm Vinegar, draw out his Yard, and wash it also, then ride him to some running stream up to the belly to allay the heat: do this lustily for a quarter of an hour, and so after for three or four days, and it will cure him.

Of the Pains in the Head, with the Remedy.

THis is an evil distemper that befalls the head. The cure is: Take a pint of Malmsey, five new laid Eggs, a head of bruised Garlick, small Pepper, Cinnamon, and Nutmegs beaten fine; give it him to drink three days together, and let him fast six hours after.

Of a Horse that stumbleth, which is called the Cordes, with the Remedy.

THis distemper appeareth in the further Legs of the Body of the horse: it is called the Cordes, because the Corde is a Sinew that breedeth amongst the Sinews, the one end cometh down towards the Shackle-vein, and so up through the Leg, and goeth over the inward side of the Knee, and so over the Shoulder, and so along the Neck by the Weasant, and it goeth over the Temples under his Eye,
and

and down over the Snout, betwixt both the Nostrils and the Gristle, there knit the length of an Almond. The Remedy is, to take a sharp Knife, and cut a slit even at the top of his Nose just with the point of the Gristles, open the slit, and you shall perceive a white string, take it up with a Boars Tooth, or a Bucks horn, that is crooked, or some Bodkin made so, and twine it about the strait, and cut it asunder; you may twine it so much, as that you may rear his foot from the ground, then stitch up the slit, and anoint it with Butter, and the horse will undoubtedly be cured.

Of the Morefound, with the Remedy.

THis is an evil disease, which proceeds from riding fast till the horse sweat, and then being set up presently in a cold place without Litter that he takes cold on his feet, and that more especially before that it appeareth in the hole under the heart of the foot, for it will grow down, wax white, and comly like a Pumice; and also will appear in process of time on the wrinkling of the hoof, and the hoof before will be thicker and more brittle, then if he had not been more found: nor will he tread so boldly upon the hard stones as he did before. The Remedy is, paring and good shoeing, which being carefully done, he will do good service.

Of the Enterferre, with the Remedy.

THis distemper proceeds from the ill shoeing of the horse; it appeareth oftentimes both behind and before, between the feet against the Fetlocks,

locks. There is no other Remedy for it but good shoeing.

Of the Scelander, with the appointed Remedy.

THis distemper is in the bending of the Leg before; it is somewhat like a Malander, and may be cured in the same manner.

Of the Scab, with the Remedies.

THere is a disease amongst horses, which is called the Scab; it is a Scurfe in divers parts of the body; it chiefly proceedeth from leanness and ill keeping. It is commonly amongst horses. There is a filthy stinking Scab, which is called the Crown Scab, growing about the Coronets of the horns: the hair will stair like Hogs bristles, and be always mattering. When the hair is shaven away, you are to take a little Frankincense, Nitre, Tartar, and the Bark of Ash, Vitriol, Verdigrease, and Hellebore white and black, round Birthwort, and stamp them together with Yolks of Eggs and ordinary Ale, then after that boil them, and anoint the sore place. This Oyntment will also serve for the Scab and the sore Crupper.

A Remedy for cut and bruised Sinews.

Take of Tar and Bean flour, Oyl of Roses, and lay it hot to the place: of the same effect are Worms and Sallet-Oyl fryed together: to the same purpose also serves the Oyntment of Worms, which you may have at the Apothecaries.

For a Horse that cannot piss.

Take a pint of white Wine Vinegar, half a pound

pound of Simgreen, bruise it small, and wring out the Juice, take a handful of Fennel, and a handful of Fox-Gloves, the Leaves of the Flowers, two ounces of Gromwel-seed, and half a pint of sweet Honey, stamp them well together, and strain them into Vinegar. Let him stand without meat and drink 24 hours. *Probatum est.*

To bring Hair again.

Take the Dung of Goats, and some Honey and Allum, and the blood of a Hog, boil them together, and being hot, rub the place therewith.

For the Stone and Collick in a Horse, the Remedy.

Take a pint of white-Wine, half a pint of Bur-seed, and beat them small, two ounces of Parsley-seed, half a handful of Hop, half a handful of unlet Leeks, and half a handful of Water-creffes, half an ounce of black Sope, and mingle them together, stamp and strain them, but put the Bur-seed and Parsley-seed together to it after it is strained, and then warm it, and give it him to drink.

Of a present Remedy to kill the Fire either in Burning or Shot.

Take Varnish, or Oyl and Water beaten together, and anoint the place with a feather.

To ripen an Impostume.

Take Mallow-root, and Lilly-roots, and bruise them and put them into Hogs Grease, and Linseed-meal, plaister-wise, lay it to.

For a Wrench in the Foot-locks, or any other Joynt, that is suddenly done.

Take of Narvil, and black Sope, and boil them to-

together a little on the fire, and annoint with it.

For the dangerous Galling of a Horse, an excellent Remedy.

Take a pottle of Verjuice, two penny worth of green Copperas, boil it in a point and a half, and wash and searh the hole therewith, and fill it with red Lead, and let it remain three days untouched, then wash it with the same, and fill it again with red Lead. This will heal it, though it be galled to the body.

Of Warts in general, and of the spongy Wart, with the Remedy.

There is a distemper that some Horse-men will neither allow to be either a disease or hurt, and that is, if a Horse want Warts behind, beneath the Spaven place: for then he is no Chapmans Ware, if he be wild: but if he be tame, and have been ridden upon, then *caveat Emptor*: Let the Buyer beware that he hath both his eyes to see, and his hands to handle; there is a Saying, That such a Horse should dye suddenly when he hath lived as many years as the Moon was days old, or such time as he was foaled. But to pass over this light digression; there is a Wart which is called Spongy. The Cure is, if it be long enough, to tie a thread about it, and it will eat off, or else to take it off with a hot Iron.

To help the Surbaiting or Soreness of a Horses Feet.

VWhen you find your Horse to be Surbaited, presently clapon each of his Fore-feet
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two New-laid Eggs, and crush them therein, then upon the top of them lay good Cow-dung: Thus stop him for four hours, and he will recover.

For a Wrench, or strain in the Pastern.

Take a quart of Brine, and seethe it till it be ready to boil over, and then strain it, and put into it a handful of Tansie, a handful of Mallows, a Saucer full of Hony, a quarter of a pound of Sheeps Tallow, beat them together, and set them on the fire until they are well sodden, and then lay it hot to the Tent, and sew a cloth fast about it, and so let it rest five days, and it shall cure him.

For a Back Sinew-strain, or any other Strain.

Take an ounce of Turpentine, and two or three spoonfuls of Aqua Vitæ, and beat them together, till they come to a perfect Salve, then anoint the Strain very well therewith, and heat it either with a hot Brick, or Bar of Iron; and thus doing three or four times, it will take away the strain.

For a frothy Hoof.

First, with an Instrument make hollow the Extremities of the Hoof on the out-side, till the principal Vein break; let all the blood come forth, then fill up the hole with fine Salt, and Hurds steeped in Vinegar, and then bind them, so that they shall not fall off. This is the sure way to make a hard and sound Hoof.

Of the Atteint.

It is a distemper that proceeds from an over-reaching before; and if it be behind, it is the treading of another Horse, which every ordinary Farrier knows how to cure, and therefore we shall wave it.

Of the Mourning of the Tongue.

I shall pass over this Distemper as it is held incurable.

A Remedy for a Pinch, or a Gall in the Withers.

First cut out the dead flesh, and make a Tent with the White of an Egg, and then wash the part with warm White-wine, and afterwards anoint the sore place with white sweet Suet.

A present Remedy for the Staggers.

When you find your Horse distempered in his Head, then take a piece of woollen Cloth, and bind it fast to the end of a stick, being well rubbed with good Barbary Sope, and then put it into both his Nostrils with as much ease as you can, and it will draw it forth very gently again : This is a perfect Remedy.

An excellent Remedy for the Strangles.

When you first see the Strangles growing, prick them under the Throat in the Morning, and after cover the Horses head with a Linnen-cloth, and then rub him often under the Throat, with fresh Butter, on the sore place, and it will Cure him.

A Remedy for the swelling of the Cods.

Take strong Vinegar, white Chalk, well powdered, stir it well, and make a Paste, anoint the Cods of the Horse three or four times a day, and in few days it will cure him.

A Remedy for the Mattering of the Yard.

Take a pint of White-wine, boil therein a quart of Roche-Allum, and with a Squirt thrust it very far into his Yard; squirt the same some three or four times, to pierce and cleanse the bottom from the filth, and thus continue till he be whole.

An excellent Cure for the Tetter.

Before you meddle with the place, first draw blood from his Legs, and then strike the Veins of the Legs on the out side, and on the in-side, but not on the place where the Hoof comes forth, then wash the place with White-wine, and mingle the Juice of Prunella with powder of Galls and clear Water, and with this Liquor, beat the Hogs-grease and liquid Pitch, that all become like Honey, and having so done, anoint the Tetter, and in six times dressing it will be Cured.

*A rare Medicine for a sore Back, be it never
so wrung with a Saddle.*

Take of Sheeps Dung to the quantity of three parts of your Plaister, and the fourth part of dry Wheat and Rye-flour, and mingle them well together, and let them boil a quarter of an hour in good fair water, and then lay it on warm, and at two or three times applying, it will Cure the Back : This is a tried and approved Plaister.

For the Botch in the Groyns of the Horse.

The Cure is, to take of Wheat-flour, Turpentine, and Hony, of each a like quantity, stirring it to make a stiff Plaister, and to lay it to the sore to break it, and then Lance it : Tent it with Turpentine and Hogs Grease.

A Remedy for the Lax.

Take of Bean-flour, and Bole Armony, of each a quartern, mingled in a quart of Red-wine, give it him Luke-warm, and after it, let him drink warm water, with Bean-flour ; but if that will not stay him, then give him half a penny worth of Allum beaten into powder, and Bole Armony beaten small, in a quart of Milk, stirring them till all the Milk be
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of a Curd, and this will stop him.

A Remedy for the Costiveness, or Belly-bound.

Take of the Decoction of Mallows, a quart, put to it half a pint of Oyl, so much Butter, an ounce of Benedict Laxative, and pour it into his Fundament with a little Horn, and hold his Tayl close to his Fundament, whilst another doth lead him, and so keep it in him as long as you can, and after keep him warm, and give him warm water to Drink.

An excellent Remedy for the Yellows.

The cause, thereof, is the abundance of bad humours ; the Cure is plain : Let him bleed, if you see it yellow, a pottle, then give him a quart of White-wine, of Saffron and Tamerisk, of each half an ounce, and the Juice that is wrung out of two handfuls of Selandine, let him take it blood-warm, and keep him warm, and with good Mashcs, wherein put two spoonfuls of the powder of Brimstone. Some will give him in this Drink the green Ordure of Geese strained.

A Remedy for the Swelling of the Gums.

The cure is, to make him to bleed well in the Palate of the Mouth, and also to scarifie the rank Gums, that the blood may come out, then rub them soundly with Vinegar and Salt.

A Remedy for the Rists and Corruption in the Palate of the Mouth.

Take sharp Vinegar and Salt, and wash the same, and then anoint it with Hony. For the Lampas and Bladders in the Mouth (as we have said) every Smith can cure it.

A certain Remedy for the Camey in the Mouth.

This distemper proceeds from the eating of filthy

Hay, that Cats, Dogs, and other Vermine have pissed upon, which will cause the Horses mouth to be clammy and furred, so that he will not eat. The Cure is, to let him blood in two great Veins under the Tongue, and to wash his mouth with Vinegar and Salt, and to give him new Bread that is not hot.

A Remedy for the Heat in the Mouth.

Turn up the upper Lip, and jag it with a Lancet, that it may bleed, and wash it with Vinegar and Salt.

A Remedy for a cold in the Head.

The cause proceeds from some heat, or standing too much still, or from having some Air piercing his head when he is hot, or by some humours congealed after long rest, and full feeding, and through the want of exercise to expel the same. The signs are a continual distilling Rheum, waterish Eyes, or his short drawing of breath at the Nostrils, when the Caves and Passages of the breath are ill stopt. The Cure is, put upon his head a double hood, and every morning ride him when he is fasting; take two Goose-feathers dipt in Oyl of Bay, and thrust them up into his Nostrils, through the ends whereof with a Needle, put two threads to fasten the same to the Head-stall, so that the feathers may not fall out, and to the Snaffle and Bit that he is rid with, fasten a Root or two of Polypodium of the Oak, which hath been steeped all night in Spike-Oyl, and every time you ride him, anoint the same with the same Oyl, and when he cometh home, put on his head the double hood, and perfume him hot with Frankincense, casting a cloth over his head. Use him thus nine days together, and give him warm water or good Mashcs, during the said nine days;

days ; for the Rhumes of continuance are very dangerous, and many times remediless, leaving behind them a worse disease than themselves.

An excellent Remedy for the Canker in the Mouth.

Wash the Mouth with strong Vinegar, made thick with the powder of Allum, two or three days together, to destroy the ulcerate matter ; then take a quart of fair water, of Allum four ounces, of Hony four or five spoonfuls, and Maudlin-leaves, of Sage-leaves, and Columbine-leaves, of each a handful ; boil all these together till half be consumed, and then every time being warmed, wash the same two or three days, and it will heal it.

Of the Loufie Disease.

There are Horses that will be Loufie ; this distemper of their proceeds from too much leanness, cold, and ill-keeping: It is most commonly amongst young Horses. We shall not insist upon the Remedy of it, as it is so familiarly practised by every Smith.

*Of the Repairing of a broken Hoof, that
it may grow.*

Take of Garlick-heads seven ounces, of Herb-Grace, three handfuls of Allum beaten and sifted, of Barrows Grease that is old, two pound ; mingle all these with Asses Dung, boil them together, and anoint the Hoof therewith.

A certain Remedy for the Fretting of the Guts.

Take in the morning a quart of good Ale, and four ounces of Fenugreek, seven ounces of Bay-berries, as much Long-Pepper, an ounce of Ginger, two ounces of Watercresses, an handful of Sage, another of Mints; beat them together in Ale, then strain it, and give it him blood-warm, rope all his Legs, and tie him so, that he lie not down ; put him into a

sweat, keep him hot, give him no cold water for three days after, feed him with dry Beans and Oats, and the horse will recover.

Of pulling out of Shivers or Thorns, and of Swelling.

The Cure is, to pull them out, if they may be seen; but if there be such a swelling, that they cannot be seen, then take Wormwood, Paretory, Bearsfoot, Hogs-grease, and Honey, boil them together, and being hot, make a Plaister. It is an excellent Remedy for any Swelling, so also is Wine-lees, Wheat-flour and Cummin boiled together, and when it is at a head, lance it.

Of the Strangullion.

It is an easie disease to cure, but the horse will be sore sick with it; it proceeding from a chafing heat, that will make him sweat, and afterwards it will rise and swell in divers parts of his body, as big as a mans fist: It will break of it self if it be kept warm.

Of Blindness.

A Horse will be blinded with too much labour: This distemper, if it be young and taken betimes, is best cured by giving of him ease.

Of the Foaling of the Tard, with the Remedy.

The Cure is, to wash the same with warm white Wine, and anoint it with Oyl of Roses and Honey mingled together, then put it up with a Cod-piece of Tross, keep it up still, and dress him every day once till he be whole.

Of the Millets, with the Remedy.

This distemper appeareth in the Foot-locks behind; it causeth the hair to shed three or four inches in length, and a quarter of an inch in breadth, like as if it were bare. It is seldom or never cured, but
a horse

a horse may live, being purged with ordinary Purges, for a long time with this distemper.

An excellent Remedy for the String hault, or any old Strain or Lameness in the sinewy Joynts.

Take Boars Grease, Bole Armoniack: black Sope, and Nerve-Oyl, of each a like quantity, boyl them all together, and then apply it hot to the grief, rubbing and chafing it, and also heating it very well, either with a hot Brick, Brick-bat, or hot Fire-shovel: Thus do once every day, until the pain be gone. The String hault is a distemper which maketh the horse to twitch up his Leg; it proceeds for the most part from a cold: it seldom appears outwardly.

A Remedy approved for the Hide-bound, by some improperly called the Affreyde.

The cause thereof is a sudden cold after a great heat; when the Pores are open, the cold entreth, and maketh an attraction of the Sinews, so as that the horse seemeth to go or travel with great grief, his skin being as it were starched, shrunk, and clinging to his Ribs. The Cure is, to let him blood in both the Flank-veins, being next the girding place and the Flanks; then take a quart of white Wine, and pnt thereinto three ounces of Sallet-Oyl, and of Cummin one ounce, of Anniseeds two ounces, Liquoris two ounces beaten into powder, and give it him warm, then let him be rubbed half an hour together; cover all his Back with a Sack thoroughly soakt in a Tub of water, and the water wrung out and upon that cast many cloaths, and gird them fast unto him to bring him to sweat, which is the only and chief thing to recover him; then keep him with good Mashcs, and every day let him be so used for 7 or 8 days together, give him sodden Barley and Beans

Beans for his diet, and green Mault on the floor, and after the eight days, let him blood in the two Breast-veins, about a pint ; then give him to the quantity of a pint and a half of Sack, and a quarter of a pint of Saller-Oyl, four penny worth of the best Treacle ; ride him until he sweat, then presently set him in a warm Stable, and keep him hot : at night give him a good Mash of Mault, with the powder of Brimstone, to the quantity of two spoonfuls.

A Remedy for the Hurt of the Tongue with a Bit.

The Cure is, to wash it with Allum water, then take black Bramble-leaves, and chop them with Iard, and put them within a clout, and make them as round as a Ball, then dip the same in Honey, and annoint the Tongue therewith until it be whole.

A Remedy for the Giggs in the mouth.

They are swellings with black heads growing on the inside of the Lips. The Cure is, to slit them, and thrust out the corruption, and to wash the same with Vinegar and Salt.

An excellent Receipt to fatten a Horse.

This way I have experienced, and found it to be good and certain : Take of Elicampane, of Cummin-seeds, of Tamericks, of Anniseeds, of each two ounces ; of Groundsel a handful : boil all these very well with three heads of Garlick, cleansed and stamped in a Gallon of strong Ale, then strain it well, and give the Horse a quart luke-warm in the morning fasting, then ride him till that he be warm, set him up hot. Thus do for four or five mornings, then turn the horse to Grass (if it be a fit suitable time of the year) and he will feed heartily. But if the time of the year serve not for Grass, then you must keep him in the House, and over and besides the
Drink

Drink before prescribed, you must take fine powder of Elicampane, and the fine powder of Cummin-seeds, of each a like quantity; mix them well together, then every time that you give your Horses Provender, which should be thrice a day in the morning, noon, and night, take half an ounce of this powder, and sprinkle it by little and little, and a little into his Provender, for fear he should nauseate it, until it be all eaten up. And thus do for fourteen dayes together at the least, and you shall see the Horse prosper in a wonderful and strange manner.

An excellent Remedy against a Horses surfeiting with Provender.

When a Horse hath eaten more than his stomach can well digest, he is in much pain, so as that he is not able to stand, but lyeth and walloweth as if he had the Bots. The Cure is, to let him blood, and to draw his Yard and wash it, put a piece of a Clove of Garlick into it, to make him piss: give him also a Clyster with the water of sodden Mallows, fresh Butter, and Sallet Oyl; keep him warm, and let him eat very little for four or five days.

These following things are most excellent to put into a Horses Provender, to preserve him from Diseases.

The powder of Wolfes Liver, the powder Eula Campana, the powder of Polypodium of the Oak; fine cut pieces of Rhubarb, the powder of Brimstone made fine, the powder of Liquoris, Aniseeds, Fenn-greek, Turmerick, Bay-berries, long Pepper, Agrimony, Chamomil, Wormwood, Savin, Linseed, Smallage, Parsley, Rue, Hysop, Coltsfoot, Horehound, and such like.

Of

Wound Of the Catarrh in Hogs, with the Remedy.

It is a Rheum which makes their Eyes to water, and a moisture to ascend up into the Head, which breedeth a corrupt matter, somewhat of affinity with the Plague. It seizeth upon them for the most part from their eating of too much fruit that lyes rotten under the Trees. For this distemper Marsh-mallows are excellently good mixt amongst their meat.

Approved Cures for a Hog bitten by a mad, or by other Dogs.

If he be bitten by a mad Dog, take of strong Chamber-lie, and mix it with Bay-Salt and Soot, and put therein an Addle-Egg, or two, then beat them all together, and make it boyl a little, then rub the place as hot as he may well endure it without scalding, with a stick, and a clout tied to the end of it. Use this twice or thrice, and he shall do well. But if he be bitten by other Dogs, that he is like to come by an Apostume to avoid the danger thereof, you must wash his Wound betimes with Stale, Salt, and Nettles bruised, or Vinegar and Mallows boiled together, and some Hogs-grease put thereunto, and therewith bathe the Sore; then anoint with Tar, and fresh Grease mixed together, and he shall do well.

An approved Romedy for the Staggers, or Stirring Disease in Hogs.

The Cure is, to put Sea-bur-knob in the Roof of their mouths; cut it, and let it bleed, and take the gowder of Lemmon and Salt, and rub it therewith, then let them have a little Stale, and they will recover.

To make a Hog to Scour,

Give him smoaked Barley in the straw, as it is also stewed for the wethering of a Cow to help her.

Of the Lethargy in Hogs, with the Remedy.

If this disease come, the Hog-herds shut up all their Hogs together in one house, and let them there remain a day and a night together without any meat or drink. The next day after give them water, in which is stamped the Roots of wild Cucumbers. And as many as have drunk thereof, will begin to vomit, and afterwards by Vomiting, are purged and cleared for the distemper.

A Remedy for the Lask in Hogs.

Give them dried Beans, beaten Savil, mixed with Broom.

To kill Maggots in Hogs.

If they breed in the Ear, or otherwise, in any hollow place under the skin, you must take the Juice of Hemlock, and pour it into the hole, and it will kill them, or else they will immediately void them of a great bigness.

An approved Remedy for the Disease in Hogs, called the Milt.

The Remedy is, by making them Troughs to feed out, of a Wood in Latine called *Tamerix*, which in English is called Quick-Beanwood, out of which will come such a moisture, that it will heal the Inflammation of the disease; for sometimes there proceeds such an Inflammation from the Milt, that it breeds a Pestilence.

To cure Hogs that have eaten of poysonous Herbs.

Such as Henbane, and Hemlock; to cure them, you must give them the Juice of Cucumbers warmed,

ed, the which being drunk, will cause them to vomit, by which they cleanse their stomachs, and recover their healths again. There are two other Herbs, the Cameleon Thistle, and the Goose-foot, which are death for them to eat.

To Cure the Apostumes under the Hogs Throats.

When they have Apostumes and Kernels under their Throats, they ought to be let blood under the Tongue, and when that you have drawn blood sufficiently, you must Rub and Chafe all his Throat and Groyn.

An approved Cure of the Garget in Hogs.

This is a dangerous disease, that many of them die of; it is a swelling and Inflammation of the Throat, behind the Jaws of a Hog. I cannot be acquainted with any other Remedy; for it is but this, that they use to slit it in the midst, as long as the Inflammation or Sore is, and then to flay up the skin on both sides of the slits, and so far as the sore is, rub it with Nettles and Salt, and lay Tar upon it, and he shall recover.

A Remedy, together with a Bath for a Swine that hath the Swine-Pox.

For the Cure, give them the Powder of Brimstone with some Salt. A Bath to wash them, is as follows, take Yarrow, Plantane, Primrose leaves, Bryar-leaves, old Oaken-leaves of a year, of watry Bettony, of each two handfuls: Boil them in two Gallons of Running-water, till that they are tender, and then wash your Hogs and Pigs therewith, and use this once or twice, and it will drie up.

A Remedy for Loufie Hogs.

This disease comes to them from leanness, and want of good keeping in Winter; for so long as they

they are Loufie, they will not thrive. The Remedy is, take Quick-silver, and kill it with Sallet-Oyl and Fasting-spittle, then mix therewith fresh Grease, or Neats-foot Oyl, and so anoint them all over.

Preservatives against the Meazles, with the most approved Cures of them in Hogs.

To keep and save your Hogs from being Measled, take this course; You shall use in the summer especially in the Dog-days (which last from the midst of *July*, to the middle of *August*) to give them amongst their Wash and other Meat, chopped cold Herbs, of Lettice, Endive, Succory, Violet-leaves, of Dandelion, Sow-thistle, or Sumitors, and such like, chop a quantity of these amongst their Meat, to keep them cool. Another is, to take a quart of stale Piss, or Mens Urine, that hath been kept very long, and therein put a good handful of Black-sope, stir and mix it well together with the Piss, then put therein a quantity of Whey, force the Hog, if he be nice, to drink it. Let him rest two or three hours after it, and then give him some other meat, not much: And so let him rest without any other sustenance until the next morning, for a weeks space or more, as you shall have cause, and you shall see this Experiment made good.

To fatten Sheep.

All things will fatten Sheep, which are mingled with Salt-water, as Vetches, Bran, Chaff, and such like.

To make the Wool to come again.

If the Wool of the Sheep after they have been scabby, do fall off (as in some places the Wool will go clear off:) To make it grow again and supply

ply the same place, greafe them with Butter mixed with Tar, Oyl, Goose-grease, or fresh-Grease; for Tar alone is too sharp, a fretter and a whealer, without it be mixed with some of the aforesaid Ingredients.

Of the Red-water, with the Remedy.

This is a certain Bladder with water under the tip of the Heart, which scalds and consumes the Heart, and at length will kill the Sheep. The best help is for some nights to chase them with a Dog, which will preserve them from the mischief of this distemper.

An excellent Remedy for the Cough of a Sheep.

You must give him in the morning with a Horn, a little of sweet Almonds, mixed with a little white-Wine. Let him take it warm; let him have new straw, and make him to eat of the Colt-herb growing on Lands: some call it Horse-hoof.

Of the cloven Pestil.

There is no other Remedy, when he is a Lamb, but to keep it clean till it be bigger; anoint him with Tar, and when he is in reasonable case, kill him, for there is no Cure for it.

A Remedy for the Flegme.

Put the tender tops or branches of Savory into their Nostrils, or Basil into their Noses, which will cause them to sneeze, but you must close their Eyes. You must also take of the Juice of Briony, with Honied water.

To kill Maggots.

Take Oyl of Olive, and the powder of Brimstone, and so anoint therewith; or of the powder of Brimstone and Tar, mixed together, and warmed over a soft fire.

A Remedy for the Water in the Belly or Head.

Stamp and strain of Two-penny Grass, and give it him in boiled Wine. Against any water in the Head, boil Purslane in honied-water strained, and so give it him.

For the Worms in the Guts, the Remedy.

Take a quantity of the Juice of Horehound, with some Leek-blades, and bruise them, and so give it to him, and it will help him.

Of the Tin-worm.

It is a small Red Worm, with many Legs, much like to a Hogs Louse, they creep in the Grass: If Sheep, or any other Cattel do eat one, they will swell, and within a day or two die, if they are not Cured. To effect which, take a quantity of Stale and Salt, and stir them together, and give it him so, chase him a while after: Or give him the Juice of the Herb Robert, and it will recover him.

A Remedy for the Looseness of the Teeth.

For the Cure, take the tender Crops of Bryars, called the Black-Bryar, and put it amongst his meat, and his Teeth will fasten again in the eating thereof.

A Remedy for the Flowing of the Gall.

Give him half a spoonful of Aqua-vitæ, mixed with so much Vinegar, and let him blood under the Tayl, and he will mend.

A Remedy for the Choler in Sheep.

'Tis cured by giving the stale Urine of men.

A Cure for the Lousie in Sheep.

Take Quick-silver killed in Oyl Olive, or Spittle, and therewith anoint him.

Of the Wild-fire.

This is a disease counted Incurable; the Shepherds

herds have no other way but to keep the Sheep warm, and to nourish him with Goats-milk, the which will mitigate the distemper of the violence of the fire.

*A Remedy for a Sheep that hath lost her
Quide.*

If a Sheep hath lost her Quide, notwithstanding she will eat all the day, and cast it up in the night again (which casting will be like to the Paunch of a Beast) for she cannot digest it, but pine away by little and little: For the Cure, you must take Quide-wort that groweth amongst Corn like to Ground-fel; bruise a quantity thereof, and then mark when you do see another Sheep chew the Quide, and take part of her Quide out of her mouth, and mix it with the bruised Quide-wort, and roll it together, and so give it, make her swallow it, and she will do well.

An excellent Cure for the Staggers in Sheep.

Take of Long-pepper, of Liquorish, of Aniseeds, of Hemp-seeds, and of Honey, of each a penny-worth; heat all these together, and put therein a Pottle of new Milk, and stir the Honey and it with the rest altogether, and thereof give to each Lamb, or Sheep two spoonfuls, or somewhat more lukewarm, and this will cure them.

*Useful Preservatives, when the Pestilence
rageth amongst Sheep.*

If it please God that all your Cattel are sick, first you must change your Pasture, and your watering places, and drive your Cattel further off into other Pastures. If the Pestilence or Murrain rush violently on them with great heats, you must have them to coverts, shades, and cold places. If it
pro-

proceed from cold, you must have them into open places against the Sun, you must drive them very softly, keeping them in a kind of gentle exercise, yet not to let them rest and lie too much. And when that you have brought them to the appointed place, you must part them into many Troops and Bands, and there let them be carefully lookt to.

A Remedy for the short Breath and Purfie.

You must cut their Ears, and change their Pasture, also slit their Nostrils : Some hold it necessary to give them Anniseeds, Liquoris, and Sugar candy ; all finely beaten together, and mixed with old Grease, or of the powder of Juniper-berries, administered to them with the Juice of Angelica, with a Horn, in Wine or Water is excellently good.

To help the Wethering of a Sheep.

Stamp the Leaves of Mallows with strong Ale, and give it to the Ewe, and she shall do well ; the Juice of Mugwort will do the like.

A Remedy for the Turning Disease in the Sheep.

This distemper causes them to hold their heads on one side ; if she hold her head on the right side, you must strike off the Horn on the left side ; for under the Horn there is a worm which you must anoint with Tar, then bind a cloth on it, and the Sheep will recover.

For the Jaundies.

The stale Urine of men, is accounted the best Remedy.

A Remedy for the Water in the Belly of a Sheep.

You must cut a hole in the Belly of the Sheep, put in a feather, and let out the water, and stitch it up again.

*A Remedy for the Water-bladder under
the Chin.*

If you feel it, you shall find it soft; there is no other way but to Lance it a little, and then to Tar it.

A Remedy for the Lung-sick or Purpsines.

Stamp Lung-wort, and strain it in a little Honey-water, and give them of the Juice of Carduus Benedictus, called by some Sow-Thistle mixt with warm Ale, and it will by Gods Blessing cure them.

To cure the Glanders or Snivel.

If this disease continue upon the Sheep two days, the best way will be either to separate him from the rest, or to kill him. Some use for the Remedy, to take a stick, and therewith to take out all they can get out, and so to make the sheep clean, when any occasion is, upon which he will somewhat recover. Others give them the Juice of Bettony with honeyed water, and the Herb called Bucks-beard, which groweth higher than that which in Latine is called *Pichomenon*. This Herb stamped and given with Wine, is marvellous good against cold or flegm in any parts of their bodies.

To cure the Itch or Scab in Sheep.

Anoint with Goose-grease and Tar mixed together with the tender Crops of Broom in May, stamp and boil them with Goose-grease, put Tar to them with a like proportion, then make two shends on both sides of his Backbone, from his head to his tayl, and anoynt with the aforesaid Grease, and you shall need no more anointing. There is a scabbiness also amongst Lambs, being half a year old, towards Winter, or the next Fall of the Leaf; (the Shepherds say) the cause is, for that the Rams at that time are scabby that get them, and that then all the
Lambs

Lambs shall be scabby at the next Fall. To heal this distemper, you must grease them with Tar mixt with fresh Grease, or Neats-foot Oyl, or Goose-grease. There is another scabbiness which happens sometimes on the Mousels of the sheep, and that proceeds from the place where there is great plenty of Furs and Grose, they by the eating of the tops and flowers thereof, do prick their Lips and Mousels, from whence come scabs, which you must heal by anointing them with fresh Butter. There is another scab which they have, which comes through the negligence of the Shepherds, when they suffer them to feed on the Grass covered with Dew. To remedy this, take Salt and Hyssop, a little quantity beaten together, and therewith fret and chafe the Palate of the Mouth, the Tongue, and all over the Mousel, and they will be cured.

*An excellent Remedy for the Giddiness
in Sheep.*

This distemper proceeds from a Bladder in their heads, you shall find it soft under your finger, and there you must cut it. For any other pains or Giddiness of the head, these following Remedies are special good: Take the Juice of Ivy leaves, and put thereof into his Ear, and bind or close it, so that it may not be cast out, or the Juice of wild Thyme stamped with Ale strained and given him.

*Approved Remedies for the Haw in the Eye, and
other Distempers of the Eyes.*

Drop into the Eye, Juice of Chamomil, or Crows-foot Herbs, stampt and laid to. Against any hot cause or pain of the Eyes, to let the Juice of Dragon Herb, or the Juice of Lettice lye to it plaister-wise. For a cold cause, take the Juice of Clary

mixed with Honey, and drop it in. Also the Juice of Pimpernel put into the Eyes, and laid to, will break and kill every Haw or other Apostumes in the Eyes.

Of a stop in the Teats.

There is sometimes on Ewes Teats a certain small Mote or Scab with a black head, hanging unto it a hard watry string like flegm, which is within the Teat, which will stop her Milk : Therefore the Shepherd must have a preventive Cure in lambing time.

How to set and see over the Sheepfold.

THe best time to set over the Sheepfold is in *May*. Let it be set upon Rye-ground, if the Husbandman or Shepherd have any, and to slit it every morning or night ; and in the morning when he cometh to the Field, let him not take out the sheep presently, but raise them up by degrees, and afterwards let them stand still a good while, that they may dung and piss. And let him go amongst them to see whether any of them have the Mathes, or be scabbed, and let them see and peruse them three or four times upon the one side, as often upon the other side. And when that the Kells are gone beside the ground, then may they be let out of the Fold, and then let him drive them to the soundest place of the Field. But he that hath a fallow Field separate to himself, let him occupy and possess no Fold ; for folding of sheep maketh them scabbed, and breedeth Mathes : and when a storm of ill weather comes, they cannot flye nor go away, which must very much abate them of their flesh. But let that

that Husbandman that hath several fallow Fields, drive twenty, thirty, or forty stakes, according to the number of the sheep, upon his fallow where he would set his Fold, and that more especially in the furthest East part of the Field, from thence as they came in, for their going upon the Ground doth much good: and let the Shepherd bring his sheep to the stakes, and the sheep will rub themselves on the stakes. And let the shepherd walk about them till they are set, and so order them for two or three nights, and they will follow those stakes as he flitteth them, and set by them. And if any ill weather comes, they will rise up, and go to the Hedge: This manner of folding shall keep them from breeding of Mathes and Scabs, or in the least manner abate of their flesh; it will also preserve them from rotting. In the morning let the Shepherd put them out of their Pastures, he shall not need to have any Hurdles or Sheepflocks.

What time of the year the Rams should be put to the Ewes.

A Husbandman (as I have already said) cannot so well thrive of his Corn, except he have other Cattel, nor by his Cattel without Corn; for otherwise he should be a Buyer, a Borrower, or a Begger: and because that sheep, in my opinion, are the profitablest Cattel that a Husbandman can have, I shall discourse the more at large of them. It will therefore first be a necessary thing for the Husbandman or Shepherd to know what time he shall put the Ram to the Ews. In this particular I must make a distinction; for all times are not alike to put to the Rams, for upon the mistake of time,

there may be a great damage or loss; for that man that hath the best sheep-pasture for winter, and some springing in the beginning of the year, he may suffer his Rams to go with his Ews all times of the year to blissom or ride them when he will: but for the common pasture, it is time to put to his Rams at the Exaltation of the Holy Cross, for then the Buck goeth to the rut, and so would the Ram. But for the ordinary Husbandman that hath no Pasture but the common Fields, it is time enough at the Feast of St. *Michael* the Archangel. And so for the poor Husbandman of the Peek, and such others, that dwell in hilly or high ground, that have no Pasture nor common Fields, for them *Simon* and *Judas* Day will be a very good time; and the reason is this: An Ew goeth with Lamb twenty weeks, and useth to yeare her Lamb in the twenty first week; and if she have not convenient new Grass to eat, she will want Milk for her Lamb, for want of which there are many Lambs that perish and are lost, that through the leanness of the Dams, and their want of Milk, are forced to forsake their Lambs, so that in some hard Countries oftentimes, they both dye.

To make an Ewe to love her Lamb.

IF the Ew have Milk, and will not love her Lamb, put her into a narrow place made of Hordes or of smooth Trowse, a yard wide, and put the Lamb to her to suck it; and if the Ew strike or smite the Lamb with her head, bind her head with a Hay-rope or Cord to the side of the Pen, and if the Lamb will not stand side-long, call the Ew, and give her a little Hay, and tye a Dog by her, that she may see him; and

and this fright will in a short space cause her to love her Lamb: and if he have a Lamb dead, whereof the Dam hath much milk, slay the Lamb, and tye that skin upon another Lambs back that hath a weak Dam with little milk, and put the good Ew and that Lamb together in the Pen, and in one hour she will love the Lamb; and then he may take the weak Ew away, and put her in another place, and by this means he may save both hers and the Lambs life.

At what time Lambs should be weaned.

IN some places they never sever the Lambs from the Dams, which is for two causes; one is, in the best pasture, where the Rams go away with their Ew, there it needeth not; for the Dams will grow dry, and wean the Lambs themselves. Another cause is, he that hath no sound pasture to put his Lambs into when they should be weaned; he must either sell them, or let them suck as long as the Dams will suffer them. It is a common saying, That the Lamb shall not rot as long as it sucketh, except the Dam want meat. But he that hath several and sound pastures, it is time for such a one to wean his Lambs when they are sixteen or eighteen weeks old at the farthest, and the Ew shall again the better take the Ram. And the poor man of the Peek Country, and such other places where they use to milk their Ews five or six weeks, &c. spoil their Lambs, so as that they are never so good as those that suck long, and have meat enough.

*To draw sheep, and to sever them in
divers parts.*

WHen the Graſier hath many ſheep in his Paſtures, it will be convenient for him to have a Sheepfold made with a good Hedge or a Pale, the which will eaſily receive all his ſheep that go in one paſture in a dry place, and adjoining to the end of the ſame, let him make another little Fold that will contain ninety ſheep or more, and both theſe Folds muſt have either of them a Gate into either paſture, and at the end of the Fold let him make another little Fold that will receive forty ſheep or more, and between every Fold a Gate. And when the ſheep are in the great Fold, let forty of them or thereabouts, come into the middle fold, and ſtake the gate, and then let the Shepherd turn them, and look on every ſide; and if he find any ſheep that needeth any help or cure for any cauſe, take that ſheep with his Hook, and put him into the little Fold. And when that he hath taken all that need any curing, then let him put the other into whether paſture he pleaſes, and let as many in of the great Fold, and take as many in as need any handling, and put them into the little Fold; and thus go them all over, till that he have done, and then let him melt Greafe, and handle all thoſe that he hath drawn, and then ſhall not the great Flock be tarried and kept from their meat; and when he hath cured them, let him put them into their paſture.

To Meddle Tar.

L Et the Shepherds Tar be medled with Oyl, Goose-grease, or Capons-grease; these three are the best: For they will make the Tar to run and spread abroad. Butter and Swines-grease, when they are melted, are good, so that they are not salt, for Tar of it self is too sharp, it is a fretter, and no healer, without it be medled with some of these.

To make Broom-Salve.

A Medicine to salve poor mens sheep, that think Tar too costly, (the worth of which if some of the Richer sort knew, they would make use of it.)

Let the Shepherd take a sheere full of Broom, Crops, Leaves, Blossoms and all, chop them very small, and then seeth them in a Pan of twenty Gallons with running water, till it begin to grow thick like a Jelly, then let him take two pound of Sheep-suet melted, and a pottle of old Piss, and as much Brine made with Salt: Let him put all into the said Pan, and stir it about, and then strain it thorow an old Cloth, and put it into what Vessel he will. And if his sheep be not Clipped, then let him make it luke-warm, and then wash them therewith with a Sponge, or a piece of old Mantle, or of a folding of such soft Cloth or Wool, for spending too much of his Salve. And at all times of the year he may use it as he shall have occasion. Let him make wide sheds in the wool of the sheep, and anoint them with it, and it will heal the scab, and kill the sheeps Lice, neither will it hurt the Wool in the sale thereof.

of. And those that are washed, will not be scabby again, if they are well fed; for that is the best Grease that the Shepherd can grease the sheep withal, to grease him in the mouth with good meat, which is a great preservation of sheep from rotting, except there come Mildews; for a sheep will chuse the best, if he have plenty.

To grease Sheep.

IF any sheep be ~~scabbed~~^{scabbed}, the Shepherd may perceive it by the biting, rubbing, or scratching with the Horn, and most commonly the Wool will ~~rise~~^{rise}, and be thin or bare in that place. Then let the Shepherd take him, and shed the Wool with his fingers, there where the scab is, and with his finger let him lay a little Tar thereupon, and stroke it in length at the bottom of the Wool, that it be not seen above, and so let him shew the Wool, and lay a little Tar thereupon, till he have passed the sore, and then it will go no further.

To belt Sheep.

IF any Sheep Ray, or be filled with Dung above the Tayl, let the Shepherd take a pair of shears, and clip it away, and let him cast dry Moulds thereupon; and if it be in the heat of Summer, it should be rubbed over with a little Tar, to keep away the Flies. It is necessary that a Shepherd have a Board set fast to the side of his little Fold, to lay his sheep upon when he handleth them, and a hole bored in the Board with an Augur, and therein a grained stake of two foot long, to be set fast, to hang his Tar.

Tar-box upon, that it may not fall. A Shepherd also should not go without his Dog, his sheep-hook, and a pair of shears, and his Tar-box, either with him, or ready at his Sheep-fold, and he must teach his Dog to bark when he would have him; to run, and to leave running when he would have him, or else he is no right Shepherd. His Dog must be taught when he is a Whelp, otherwise it will be hard to make an old Dog stoop, or to be plyant.

To wash Sheep.

IN June is the time to shear Sheep, and before that they are shorn, they must be very well washed, which as to the Owners sale of the Wool, is a very profitable help, and so to the Cloth-maker: But let the shepherd beware that he put not too many sheep into a Pen at one time, neither at washing, nor at shearing, for fear of murdering or overpressing of their fellows, and that not any of them go away till that they are clean washed. Let the shepherd hold the sheep by the head in the water, and let him hold it high enough to preserve him from Drowning.

To shear Sheep.

LEt the Owners give his shearers a special charge to take heed of their shears, lest they twitch the sheep, and especially for pricking with the point of the shears, and that the shepherd be always ready with his Tar-box to salve them. And let him be sure that they are well marked, both Ear-mark and Pitch-mark, and Robel-mark, and let the Wool be

be well folded or wound with a Wool-wind, by one that hath good skill therein, the which shall very much advance the sale thereof.

How to draw out, and separate the bad Sheep from the good.

VVhen the shepherd hath shorn his sheep, it will then be his best time to draw and separate them in divers manners, the sheep that he will have fed, by themselves, the Ews by themselves, and the Share-Hogs and Theves by themselves, the Lambs by themselves, the Weathers and the Rams by themselves, if he have so many Pastures for them; for the biggest will beat the weakest with his head. And of every sort of sheep, it may happen that there are some that like not, but are weak; those should be put in the fresh Grass by themselves, and when that they are a little Cured, as he sees occasion, he may sell them. The often change of Grass is very wholesome and healthful for all manner of Cattel.

If a Sheep have the Mathes.

THe Shepherd may perceive this disease by the sheeps biting, or frisking, or shaking of the Tayl: This distemper is most commonly moist and wet; and if it be nigh unto the Tayl, it is oftentimes green, and filled with the sheeps-dung, and then the shepherd must take a pair of shears, and clip away the Wool bare to the skin, let him take a handful of dry Moulds, and cast them upon the wet to dry it, and then wipe the Moulds away, and lay
Tar

Tar there where the Mathes were, and a little further. Let the shepherd thus look to them every day, and cure them, if there be occasion.

Of the blindness of Sheep.

There are some sheep that will be blind for a season, and yet mend again. Let the shepherd put a little Tar in his Eye : This is the common Medicine that the shepherds use.

Of the Worm in the Sheeps Foot, and Help thereof.

There are some sheeps feet that have Worms in them, which makes them to halt. Let the shepherd take the sheep, and look betwixt his Cleft, and there is a little hole as much as a great Pin-head, wherein groweth five or six black hairs, an Inch long, or more. Let the shepherd take a sharp-pointed Knife, and slit the skin a quarter of an Inch long about the hole, and as much beneath, and put his one hand in the hollow of the foot under the hinder Cleft ; let him set his Thumb above, almost at the slit, and thrust his finger underneath forward, and with his other hand take the black hairs by the end, or with the Knifes point, and pull all the hairs by little and little, and thrust after his other hand with his Finger and his Thumb, and there will come out a worm like a piece of flesh, nigh as much as a little Finger. And when it is out, let him put a little Tar in the hole, and it will quickly be cured.

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Of the Blood, and the timely Remedy of it.

THere is a Sicknes amongst Sheep, which is called the Blood, of which they oftentimes die suddenly: The signs of his death are, that he will stand still, and hang down his head, and sometimes quake. The Shepherds Remedy for this Disease is, to take the sheep, and rub him about the head, and especially about his Ears, and under his Eyes, and with his Knife let him cut off his Ears in the midst; and also let him bleed in a Vein under his Eyes; if he bleed well, he is like to live; if he bleed not, then kill him, and save his flesh; for if he die by himself, the flesh is lost, and the skin will be far ruddier, (like to blood) than any other skin shall be.

Of the Pox, and the Remedy thereof.

THis Disease appears upon the skin in the likeness of red Purples, as broad as a Farthing, This distemper destroys many sheep. To remedy this, the Shepherd is to handle all his sheep, and to survey and look on every part of their bodies, and as many as he finds taken therewith, let him put them into fresh new Grass, and keep them from their Bellows, and let him often have an Eye over his Flock, and draw them as he hath need. And if it be in Summer-time, that there be no Frost, then let him wash them.

Of the Wood-Evil, and the Remedy thereof.

THere is a sickness amongst Sheep, that is called the Wood-Evil. It taketh them in the Spring of the year, and taketh them most commonly in their Legs, or in their Neck, and maketh them to halt, and hold their Necks awry : For the most part those that have this sickness, die within a day or two. The best Remedy is to wash them a little, and to change their ground, to bring them to a low Ground, and fresh Grasse ; for this sickness is most commonly in Hilly, Ley, and Ferny Grounds. Some for this sickness, let their sheep blood in a Vein under the Eye.

What are the things that chiefly Rot sheep.

IT is necessary that a Shepherd should know what things chiefly Rot the sheep, that he may the better preserve them. There is a Grasse called Spear-wort, it hath a long narrow Leaf like a Speares head, it will grow a foot high, and it beareth a yellow flower as broad as a Penny. It groweth always in low places: where the water useth to stand in Winter. Another Grasse is called Penny-grass, it groweth low, close to the earth in Moorish Grounds, it hath a Leaf as broad as Two-pence, but never beareth flower. All manner of Grass that the Land-flood runs over, is bad for sheep, because of the sand and the filth that sticketh upon it. All Moorish Ground and Marsh-Ground, is bad for sheep. The Grass that groweth upon Fallows, is not good for sheep ; for there is much of it weedy, and often-

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times

times it cometh up by the root, and that bringeth earth with it; and the sheep eat both. Mildew-grass is very bad for sheep, and that we may find out by the Leaves of the Trees in the morning, and especially of Oaks; take the Leaves, and put thy Tongue to them, and thou shalt taste like Honey upon them. Therefore the sheep should not be let out of the Fold, till the Sun hath the power to dry up the Mildew. Want of food will cause a great Rot amongst sheep; for then they will have neither good flesh, nor good skins, White Sincles are very bad for sheep in Pastures and in Fallows. There is another Rot that is called the Pellet, which proceeds from great wet, especially in woody Countries, where they find a want of driness.

To know Rotten Sheep divers manner of ways, whereof some of them never fail.

LEt the Shepherd use both his hands, and twirl upon the sheeps Eye, and if it be ruddy, and have red strings in the white of the Eye, then the sheep is sound; but if the Eye be white like Tallow, and the strings dark-coloured, then he is Rotten. Let him also take the sheep upon the Wool of the side, and if his skin be ruddy-colour'd and dry, then he is sound; but if it be pale-colour'd and watry, then he is Rotten. Also when the Shepherd hath opened the Wool of the side, let him take a little of it betwixt his Finger and his Thumb, and pull it a little, if it stick fast, he is sound; if it come lightly off, he is Rotten. When a sheep is killed, if his body be full of water, he is Rotten, and also the fat of the flesh will be yellow, if the Liver be cut, wherein

wherein will be little quicknesses, and live things like flocks, and also the Liver will be full of knots, and white Blisters; if it be Rotten, it will also break and crumble in pieces, but if the sheep be found, it will hold firm together.

Experimental Direction

For the Right Use of the

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Experimental Directions

For the Right Use of the

A N G L E.

HE that addresseth the River for his pleasure, must be well prepared, as to the setting forth of his Tackle. The first thing he must do, is to observe the Sun, the Wind, the Moon, the Stars, and the Wanes of the Air; he must observe the Times and Seasons to set forth his Tackles; to go for his pleasure and for his profit. As for Example, the Sun proves cloudy, then must he set forth his Ground-bait, or his Tackles, and of the brightest of his Flies. If the Sun proves bright, then must he put on some of the darkest of his Flies. Thus must he go to work with his Flies; light for darkness, and darkness for light; he must also observe that the wind be in the South, for that wind blows the Flie in the Trouts mouth. But if the
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weather be warm, it is indifferent whether the wind standeth, either with Ground-bait or Menow, so that he can cast his Bait into the River. The very same observation is for Night, as for Day; for if the Moon prove clear, or if the Stars glitter in the Skie, there is as ill Angling that night, as if it were high Noon in the midst of Summer, when the Sun shineth brightest, there is little hopes of any pleasure. For the petty *Thames* Recreation of catching of Bleaks, Dace, &c. as they are so generally known of every young Beginner, I am unwilling to trouble the Reader with such a trifling Discourse.

I shall begin, though not without some seeming digression, first with the taking of Eels. When the Angler stays a night or two, let him take four or five Lines, such as I shall inform hereafter will serve for Pikes, of fourteen or fifteen yards long, and at every two yards long make a Noose to hang a Hook armed either to double thred, or silk twist: for it is better than Wyre. Let him bait his Hooks with Millers-thumbs, Loaches, Menows, or Gudgins: Let him tye to every Noose a Line bated, These Lines must be laid cross the River in the deepest place, either with stones, or pegged, so that the Line may lie in the bottom of the River, there will be no doubt of taking of a dish of Eels; he must also have a small Needle with an Eye, to bait his Hooks, he must make two Flies, the Palmer rubbed with Silver or Gold, and the *May-Fly*: These are the ground of all Flies. To make the Palmer-Fly, he must arm his Line on the inside of the Hook; let him take his Scissers, and cut so much of the brown of the Mallards feathers, as in his own

reason shall make the Wings, then let him lay the outermost part of the feather next the Hook, and the point of the feather towards the Shank of the Hook, let him whip it three or four times about the Hook with the same silk he armed the Hook, then make his silk fast: Let him take the Hackle of the Neck of a Cock or a Capon, or a Plovers Top, which is the best, and let him take off the one side of the feather, then he must take the Hackle-silk, or gold or silver thred; and let him make all these fast at the bent of the Hook, let him work them up to the wings, every bout shifting his fingers, and making a stop, then the gold will fall right, let him make it fast: and work up the Hackle to the same place, and make the Hackle fast; and let him take the Hook betwixt his finger and his thumb, in the left hand, with a Needle or Pin, part the wings in two, then with the arming silk, as he hath fastned all hitherto, let him whip it about as it falleth cross between the wings, and with his Thumb he must turn the point of the feather towards the bent of the Hook; then let him work it three or four times about the shank, so fasten it, and view the proportion. For other Flies: if he make the grounds of Hogs-wool, sandy, black, or white, or the wool of a Bear, or of a two years old red Bullock; he must work all these grounds upon a waxed silk, then he must arm and set on the wings, as I shewed before; for the *May-Fly*, let him work the body with some of these grounds, which will do very well, ribbed with black hair; he may also work the body with Cruels, imitating the colour, or with silver, suiting the wing. For the *Oak-Fly*, he must make him with orange, tawny and black for the body, and

and the brown of the Mallards feather for the wings.

To take a Perch, the Angler in the first place must take notice that this fish feeds well ; and if he lights where they are, they will bite freely My opinion is (with some more than ordinary Experience) for to bait with Lob-worms chopt in pieces over night ; let him go to his sport in the morning betimes, let him plum his Ground, gage his Line, and bait his Hook with a red knotted Worm, or a Menow, which some hold better ; let him put the Hook in at the back of the Menow, betwixt the fish and the skin, that the Menow may swim up and down alive, being buoyed up with a Cork or a Quill ; that the Menow may have liberty to swim a foot off the ground : So doing, the Angler shall not question the profit or pleasure of his expended time.

I do now think it convenient for me to shew my opinion for floating for Scale-fish in the River or Pond : the feed brings the fish together as the Sheep to the Pen. There is nothing better in all Anglings for feed, then Blood and Grains, I hold it better than Paste ; then let him observe next to Plum his ground, Angling with fine Tackles, as single hair for half the Line next the Hook, round and small plumed, according to his Float : For the Bait, there is a small red Worm, with a yellow tip on his tayl, which is very good ; Brandlins, Gentles, Paste, or Cadice, which we call Cockbait, they lye in a gravelly husk, under the stones in the River : These are the most special Baites for these kind of fish.

There is a manner of trouling for a Pike with a
L 4 Hazel-

Hazel-rod of twelve foot long, with a Ring of Wyre in the top of the Rod, for the Line to run thorow: Within two foot of the bottom of the Rod, there is a hole made to put in a wind to turn with a Barrel, to gather up the Line, and to loose it at pleasure: This is the best manner of Trouling. But I am of opinion, that I can shew a way, either in Meer, Pond, or River, that shall take more Pikes than any Trouler with his Rod. And thus it is: First, take a forked stick, a line of twelve yards long wond upon it, at the upper end leave about a yard, either to tie a bunch of Sags, or a Bladder, to Buoy up the fish, and to carry it from the ground: The Bait must be a live fish, either Dace, Gudgeon, Roach, or a small Trout: The forked stick must have a slit in the one side of the Fork to put in the Line, that he may set his live-fish to swim at a Gage, that when the Pike taketh the Bait, he may have the full liberty of the Line for his feed. He may turn these loose either in the Pond or the River: In the Pond with the wind all the day long, the more the better: At night let him set some small weight, that may stay the Buoy, as a Ship lieth at Anchor, till the fish taketh. For the River, he must turn all loose with the stream; two or three are sufficient to shew pleasure, gaged at such a depth, as that they will go current down the River, where there shall be no doubt of excellent sport, if there be Pikes: For the Hooks, they must be double Hooks, the shanks must be somewhat shorter than ordinary: My reason, the shorter the Hook is of the shank, it will hurt the fish the less, and it must be armed with small wyre well softned. But I hold a Hook armed with twisted silk to be better.

better. If you arm your Hook with wyre, the Needle must be made with an Eye; then must he take one of those Baits alive (which he can get) and with one of his Needles, enter within a straws breadth of the Gill of the fish, so pull the Needle betwixt the skin and the fish; then pull the Needle out at the hindmost fin, and draw the arming thorough the fish, until the Hook come to lie close to the fishes body: But I hold for those that are armed with Wyre, to take off the Hook, and put the Needle in the hindmost fin, and so to come out at the Gill; then let him put on the Hook drawn close to the body, 'twill hurt the live fish the less, so knit the arming with the live fish to the Line; then let him put off either in Meer or Pond, with the wind in the River with the stream: The more that he pulls off in the Meer or Pond, he is the likelier to have the greater pleasure. There is a time when Pikes go a frogging in Ditches, and in the River to sun them, as in *May, June, and July*, there is then a speedy way to take them, and scarce to miss one in twenty. The Angler must take a Line of six or eight foot, let him arm a large Hook, of the largest size that is made, and arm it to his Line, let him lead the shank of his Hook very handsomly, that it may be of such a weight, that he may guide the Hook at his pleasure: He may strike the Pike that he sees, with the bare Hook where he pleases: This Line and Hook doth far exceed snaring. The best sport to take a Pike, is to take a Goose, or Gander, or Duck; take one of the Pikes Lines I have before described, and let him tie the Line under the left wing, and over the right wing, about the body, as a man weareth his Belt: Turn the Goose off into
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the Pond, where Pikes are, and there will be pleasant rare Feats betwixt the Goose and the Pike.

To take a Carp, either in Pond or River, if the Angler intends to have sport with some profit, he must take a Peck of Ale-grains, and a good quantity of any Blood, and mix the Grains and the Blood together, and cast into the place where he meant to Angle; this feed will gather the Scale-fish, as Carp, Tench, Roach, Dace, and Bream: The next morning let him be at his sport very early, plum his Ground, and he may Angle for the Carp with a strong Line, the Bait must be either a red knotted Worm or Paste, and he shall have sport enough.

The Angler may begin to Angle for a Trout with Ground-baits, in this manner following: First, he must be sure of a neat Taper-Rod, light before, with a tender Hazel top, which is very gentle, he may Angle with a single hair of five lengths, one tied to the other for the bottom of the Line, and a Line of three-haired Links for the upper part, and so if he have good Sea-room, he may take the largest Trout that swims. He that Angles with a Line made of three-hair'd Links at the bottom, and more at the top, may take Trouts: But he that angles with one hair, shall take five Trouts to the others one; for this fish is very quick-sighted: Therefore the best way for night or day, is to keep out of sight. He must angle always with the point of his Rod down the stream; for a fish hath not the quickness so perfect up the stream, as opposite against him, observing seasonable times. As for Example; we begin to angle in *March*, if it prove cloudy, the Angler must angle with the Ground baits all day long: But if it prove clear and bright, he must take the

the morning and evening, or else he is not like to do any good; for the times must be observed, and truly understood: For when an Angler cometh to the River for his pleasure, that doth not understand to set forth his Tackles fit for the time, it is as good keeping of them in the Bag, as to set them forth.

The Angler that doth intend to angle with the Ground-baits, let him set his Tackles to his Rod, and let him begin at the uppermost part of the stream, carrying his Line with an upright hand, feeling the plummet running on the Ground some ten Inches from the Hook, plummeting his Line according to the swiftness of the stream that he angles in; for one plummet will not serve for all streams; for the true Angling is, that the plummet runneth on the Ground. For his Bait, let him take the red knotted Worm, which is very good where Brandlings are not to be had. Now that he may make these Brandlings fit to be angled with, that they may live long upon the Hook, which causeth the sport. When he hath gathered his Worms out of the Dunghil, he must get the greenest Moss he can find, then wash the earth very clean out of it, then let him have an Earthen-pot to put his Moss into it, and let him put his Worms to the Moss in the Pot, and within two days he shall find his Worms so poor, that if he bait some of them on his Hook, he shall see that with throwing them two or three times into the water, they will die and grow white. Now the skill is, when these Worms are grown poor, to feed them up, to make them fat and lusty; he must take the Yolk of an Egg, some eight or ten spoonfuls of the top of new Milk, beaten well together in

ina Porrenger ; let him warm it a little until that it curdle, then let him take it off from the fire, and set it to cool ; when it is cold, let him take a spoonful, and drop it upon his Moss into the Pot ; every drop about the bigness of a green Pea, shifting his Moss twice a week in the Summer , and once in the Winter. Thus doing, he shall feed his Worms fat, and make them lusty, that they will live a long time on the Hook ; thus he may keep them all the year long. This is my true Experience for the Ground-baits, for the Running-Line for the Trout.

The Angling with the Menow, called in some places Peneks, for a Trout, is a pleasant sport, that taketh the greatest Fish. The Trout comes as boldly to the Bait, as if it were a Mastive-Dog at a Bear : The Angler may use his stronger and greater Tackle, and it will be advantagious to him in his Angling, to use a Line made of three silks, and three hairs twisted for the uppermost part of the Line, and two silks and two hairs twisted for the bottom next his Hook, with a Swivel nigh to the middle of his Line, with an indifferent large Hook.

Let him bait his Hook with a Menow, he must put his Hook through the lowermost part of his mouth, so draw his Hook thorow, then put the Hook in at the mouth again, and let the point of the Hook come out at the hindermost Fin, then let him draw his Line, and the Menows mouth will close, that no water will get into its belly : He must Angle (as hath been said) with the point of his Angle down the stream, drawing the Menow up the stream by little and little, nigh the top of the water ; the Trout seeing the Bait, cometh most fiercely at it, the Angler must give a little time before he

he strikes: This is a true way without Lead; for many times I have had them come to the Lead, and forsake the Menow, which he that tries in time will prove.

My next task will be to instruct the young Angler how to angle with a Flye. Let him fit himself with a Hazel, either of one piece, or two set together in the most convenient manner, light and gentle: Let him set his Line to the Rod, for the uppermost part he may use his own discretion; for the lower part next the Fly, must be of three or four haired Links. If he can attain to angle with one hair, he shall have the more rises, and take more fish; let him be sure that he do not overload himself with the length of his Line: and before that he begin to angle, let him make a tryal, having the wind on his back, to see at what length he can cast his Flie; that the Flie light first into the water; for if any of the Line falleth into the water before the Flie, it had been better unthrown than thrown. Let him always cast down the stream, with the wind behind him, and the Sun before, it is a great advantage for him to have the Sun or the Moon before him. Let him begin to angle in *March* with the Flie: but if the weather prove windy or cloudy, there are several kind of Palmers that are good at that time. First is a black Palmer ribbed with silver: the second, a black Palmer with an Orange tawny body: thirdly, a black Palmer, with the body made of all black: fourthly, a red Palmer ribbed with gold, and a red Huckle mixed with Orange Cruel. These Flies serve all the year long, morning and evening, whether windy or cloudy weather. But if the Air prove bright and clear, he may imitate the Hawthorn Flie, which is all black
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and very small, and the smaller, the better. In *May* let him take the *May-Flie*, and imitate that, which is made several waies: Some make them with a shammy body, ribbed with a black hair; others make them with fandy Hogs-wool, ribbed with black silk, and winged with a Mallards feather, several ways, according to the fancy of the Angler. There is another called the *Oak-Flie*, which is made of Orange-colour'd Cruel, and black, with a brown wing: another *Flie*, the body thereof is made with the strain of a Peacocks-feather, which is very good in a bright day. The *Grashopper* which is green, the smaller *Flies* are made of indifferent small Hooks, which are the better: these several sorts I have set down, will serve for the year long, observing the times and seasons: And let him take notice, that the lightest *Flies* are for cloudy and dark weather, the darkest for bright and light, and the rest for indifferent seasons, for which his own judgment, experience, and discretion must guide him; so that he must alter these *Flies* according to these directions. Of late daies the Hogs-wool, of several colours, the wool of a red Heifer, and Bears-wool are made use of, which make good grounds; they are now very much used, and procure very good sport. The natural *Flie* is a sure way of angling, and will catch great store of *Trouts* with much pleasure. As for the *May-Flie*, he shall always have them playing at the River-side, especially against Rain. The *Oak-Flie* is to be had on the But of an Oak, or an Ash, from the beginning of *May* to the end of *August*: it is a brownish *Flie*, and stands alwaies with his head towards the root of the Tree, very easie to be found. The small black *Flie* is

to be had on every Haw-thorn-bush, after the Buds are come forth. The Grasshopper, which is green, is to be had in any Meadow of Grass in *June* or *July*: with these Flies, he must use such a Rod as to angle with the Ground-bait; the Line must not be as long as the Rod: Let him withdraw his Flie, as he shall find to be most convenient in his Angling. When he comes to deep Water that stands somewhat still, let him make his Line about two yards long, and dop his Flie behind a Bush, at which Angling I have had very good sport. The way to make the best Paste, is to take a reasonable quantity of fresh Butter, as much fresh Sheeps Suet, a reasonable quantity of the strongest Cheese he can get, with the soft of an old stale white Loaf; let him beat all these in a Mortar, till they come to a perfect Paste: and when the Angler goes to his sport, let him put as much on his Hook as a green Pease.



The Nature, Use, and Benefit of Marle.

Marle is a very useful thing, the Nature of it is cold, which is the reason that it saddens the Land exceedingly, for it is very heavy, and will go downwards. Some Countries yield Marle of several colours, as 'tis affirmed of *Kent*, wherein is found both yellow and gray; the blew and red are counted best. To marle together, I hold not proper; but when you are resolved to lay down your Land to graze, be sure at the last Crop you intend to take (which may be two or three more after marling) then manure your Land, for the less binding, and the more light, loose and open, the more fruitful it is, so that it will produce a gallant Clovery. The first year after you have laid it down upon the Wheat or mixed Corn-stubble, you must run it over again with Dung, and it will pay treble. Now the Lands upon which Marl is most natural for increase, is upon your higher sandy Land, mixed of gravelly or any sound Land whatsoever, though never so barren, to which it is natural and nourishing, as Bread to a mans Life.

The best way of planting of Trefoyl or Clover-
Grass.

There are several sorts of Clover, I shall only speak of the great Clover that we fetch from *Flanders*, called *Trefoyl*, named by *Clusius* *Trefolio majus terrium*, which bears the red Honey-suckle, whose root and branches far exceed our natural Meadow-Clover, and bears a very small seed like Mustard-seed, not so round, but longer like a Bean; the best is of a greenish yellow colour, some a little reddish; the black, I suppose, will not do well. Your Dutch or Low-Country seed, or from the lower parts of *Germany*, is very much of it, but very hazardous that comes over hither; but being well chose there (for the choice is the Master-piece of the work) the transporting of it by Sea is no considerable prejudice to it; But much of it that was sold in the Seedmens Shops in *London*, was either corrupted by the Dutch before it came thence, or else parched by our drying, or else by the Shopkeepers, either mingled with old or new, or keeping it another year, and then selling it for new. The best way of Sowing of this Dutch Seed, must be by mixture of it with Ashes of Wood, or Coals coarsely sifted, or with some Dust, or good Sand, or fine Mould, or any thing else that will help to fill the Land, or spread well forth of the Land: and after this I must press as the weightiest thing of this Husbandry, to have a most special care of the even sowing of it, because the wind, though very small, hath power over this, and therefore you must chuse as calm a time as possibly you can. You may sow it

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upon any Land you intend to graze upon, any fair places in a Meadow, or High-ways trodden or poched, it will soard them : but the usual way is thus advised ; when that you have fitted your Land by Tillage and good Husbandry, then sow your Barley or Oats, and harrow them in, and after your Clover upon the same Land, covered over with small Harrow or Bush, but sow not the Corn as you usually did ; but if you will lose this Crop, you may sow it of it self. The season of it is in the beginning of *April*, or in the end of *March*, if it be likely to be a dry season. I have heard of three Crops, and some affirm that it will bear, two to cut, and one for to graze ; the first Crop may be at mid-*May* ready to cut, and this Crop is best always to be cut green, and before the stalk begin to grow too big, and begin to dry and wither, unless it be for Seed ; therefore as Experience will teach, it will be best to cut it green & young, and give it to Cattel or Horse in the Stable ; for if you cut it to keep, it will go so near together, as that it will do but little service dry ; yet if being cut young, it will be very good and sweet, and either feed or give Milk abundantly ; and then after the first cut, let it grow for Seed, and herein you must be careful, that you let it grow till it be full ripe, for it will not be very apt to shed ; and if it grow to seed, I cannot conceive of what use those stalks that are so hard and dry can be, unless it be for firing in a dry Country, so that the seed must be the advance of that Crop only, and so it may well enough, and you may have a good after-pasture, and may graze it until *January*, and then preserve it. But if you would know when your Seed is ripe, observe these two Particulars. First, observe

observe the Husk, when the Seed appears in it, then about one month after it may be ripe. Secondly try the Seed, after it begins to turn the colour, and the stalk begins to dye and turn brown, it begins to ripen, and being turned to a yellowish colour, in a dry time mow it, and preserve it till it be perfectly dry any manner of way, and then about the midst of *March* thresh it, and cleanse it from the straw as much as you can; foulder and beat the Husk again, being exceeding well dried in the Sun after the first threshing, and then get out what seed you can, and after try what a Mill will do at the rest, as aforesaid more at large: But I will give way to any that can make a better discovery. I need not prescribe a time in *July* or *August* as best to cut for seed, because some years and Lands will ripen it sooner than others will; therefore have respect to thy seed and Straw according to the former directions: But when you are to go into good seed, you must graze it upon the Land, and then be sure not to let it grow too rank and high; but if the stalk grow big, Cattel will balk it, and stain it more, and it will not eat up so kindly at first, nor graze so even afterwards, but exceeding much Milk it will yield, and feed, and nourish very well. But to affirm, (as some have done, and do confidently to this day) that it will grow on the barrenest Ground that is, as on *Windsor Forrest*, I dare not; I have known that it hath failed, and I am confident must, without exceeding great cost on Husbandry; yet that very Land well manured and tilled, dunged, limed, marled, or chalkt, or otherwise made fat and warm, will bring forth good Clover, and other rich Commodities, as they do in *Flanders*: the Na-

ture of the Land is good, but the Spirit of it is too low to raise it of itself. And this is all that is held forth in the discourse of *Brabant* Husbandry, exceeding barren Lands, but well dunged and tilled, and then Clovered, not that it is the barren Land, but the good and costly Husbandry; only the oldness of the Land, and the restiness thereof, yields more spirit to the Grain or Clover by far, then the tillable Land well husbanded, and laid down with Clover, will do very well also. The quantity of seed for an Acre, as I conceive, will be a Gallon, or nine or ten pound, though some are of opinion less will serve turn. Therefore, as I said before, I say your old Land, be it coarse or rich, as it is, or hath been disused with Tillage long, is best for Corn; so also it is the best and most certain Land for Clover; and when you have corned your Land as much as you intend, then to alter it to Clover, is the properest season. This I shall lay down for a general Rule, that whatsoever Land is neither too rank or fat for any sort of Corn, is not too good to Clover, and you shall alwayes find it to be the best Husbandry, unless you recover the barren Lands up to a good and rich condition, which is also the far better Husbandry, than to let it lie pelting and moiling upon poor mean Land unfatned by some soils or other; therefore I advise every man to plow up no more than he can well overcome by his Purse and Husbandry, and let the rest lie till he have brought up the other, and then as he hath raised one part, take up another, and lay down that to graze, either with Clover or otherwise: And let him take heed that flatters himself to raise good clover upon barren Heathy Land, otherwise than aforesaid. Let him take

take notice, he will pull down his Plumes after two or three years Experience, unless he devise a new way of Husbandry : As to the annual profit that may accrue thereby, I shall a little differ from the *Flanders* Husbandry, but shall affirm, that one Acre, after the Corn is cut, the very next year if it be well Husbanded, and kind thick Clover, may be worth twenty Marks, or twenty pounds, and so downwards, as it degenerates weaker, less worth. In *Brabant* they speak of keeping four Cows Winter and Summer, some cut and laid up for Fodder, others cut and eaten green ; but I have credibly heard of some in *England*, that about one Acre kept four Coach-horses, and more all Summer long ; but if he keep but two Cows, it is advantage enough upon such Lands as never kept one : But I conceive best for us, until we come into a stock of Seed : to mow the first Crop in the midst or end of *May*, and to lay that up for Hay, although it will go very near together ; yet if it grow not too strong, it will be exceeding good and rich, and feed any thing, and reserve the next for Seed ; and if we can bring it up to perfect Seed, if it but yields four Bushels upon an Acre, it will amount to more than I speak of by far, every Bushel being worth three or four pound a Bushel ; and then after the Math or Eadish, that year may be put up three midling Runts upon an Acre, and feed them up : All which laid together, will make up an Improvement sufficient ; and yet this property it hath also that after the three first years of clovering, it will so frame the Earth, that it will be very fit to corn again, which will be a very great advantage. First to corn the Land, which usually yields a far better

profit than grasing, and sometimes a double profit, and sometimes more, near a treble profit, and then to Clover it again, will afford a wondrous strange advance. And if you consider one Acre with the Clover and Husbandry thereof, may stand you the first year in twenty Shillings, the Land being worth no more, which may produce you yearly (if it thrives well) easily five, six, or eight pounds *per* Acre, nay some will affirm, ten or twelve pounds, or more.

Of the Plantation of Hops, and how Land is Improved thereby.

HOps is grown a National Commodity : But it was not many years since the Famous City of *London* petitioned the Parliament of *England*, against two nufances, or Offensive Commodities, were likely to come into great use and esteem ; that was *Newcastle* Coal, in regard of their stench, &c. and Hops, in regard that they would spoil the taste of Drink, and endanger the peoples healths, and for some other reasons, I do not well remember : But petition they did to suppress them, and had the Parliament been no wiser than they, we had been in a measure pined, and in a great measure starved. This Hop-plantation will require a large Discourse, but I shall contract my self to the briefest Discovery thereof I can possibly. 1. Chuse the Land that is best for them, and best Sets to plant withal. 2. The best manner of Planting them, in Husbanding of them, until they are fit for Sale. 3. The Profit and Advantage that will accrue thereby, I shall afterwards, as plainly as I can, express. 4. Describe

cribe the manner of its growth, thus: It comes up with several sproughts like Asparagus, runs up and climbs upon any thing it meets withal, bears a long stalk, hairy and rugged Leaves, broad like the Vine, the flowers hang down by clusters, set as it were with scales yellowish, called in high Dutch, *Lupullus*, in low Dutch, *Hopsssem*, and in English, *Hop*. It is Offensive upon this account, hot in the first Degree, stuffs the Head with the smell, therefore use it not too much; yet the Leaves open and cleanse. The best Land is your richest Land, it must be a deep Mould, that which lieth near the Rocks, the Poles cannot be set deep enough to stand firm; it should be a mixt Earth that is compounded of Sand and a little Clay, but much solid Earth, a strongish Land laid dry and warm, will bear the weightiest Hops. A barren, Moorish, wet Soil is not natural to Hops; but if this be laid very dry, and made very rich with Dung and Soil, it may do reasonable well. The Hop-Garden should stand warm, that it may be preserved from North and East winds, rather by Hills than Trees, as near your House as may be, and that Land you determine for your Hop-Garden, lay as Level and as Square as you can; and if it be rough and stiff, it will do well to be sowed with Hemp, Beans, or Turneps before; but in what state soever it be, till in the beginning of Winter make use of the Plough, or Spade, and this not only the year before, but every year as long as you use it; and the more pains and cost you bestow, the more profit, and is the nearer to you, resemble the *Flemming* in his Hopping. And for your Sets, and good Roots, to procure them, you must go to a Garden orderly kept, where

the Hops are of a good kind, all yearly cut, and where the Hills are raised very high, for the Roots will be greatest, be sure to buy choice Sets; they may cost six pence a hundred in some places, and sometimes you may have them for the taking up: Leave your Husbandry orderly, their Hills well drest. You must chuse the biggest Roots you can find, such as are three or four Inches about, and the Set nine or ten Inches long, and have three Joynts in a Root. Take heed of wild Hops, they are only discerned by the Root and Stalk. The unkindly Hop that likes not his Ground, Soil, or Keeping, comes up green and small in the stalk, thick and rough in the Leaves like Nettles, much bitten with a black Flie, but it destroys not the Hop, but somewhat injures it. The manner of Planting as soon as your Roots are got, is either to set them speedily, or lay them in some Puddle, or bury them in Earth; but leave them not in Water above twenty four hours: then begin to direct your Hills with a Line, tied with Knots and Threads thereto; the due distance had need to be eight Foot betwixt, because then you make the fewer and bigger Hills, the Sun comes about them. Let the Poles reach not one another, that so it may be plowed yearly the more easily, otherwise it must be digged, some say seven foot, and others say six foot, as one lately accustomed manner is. And I am confident there is most advantage by thin planting: But that I leave to each mans experience. Your hole under the Knot of your Line, had need be a foot square and deep, then if you can have the Wind South or West, it is best; if not, go on, having made many holes; but be sure to take the Month of *April*, for the work, and take two or three of your Roots, as a great old Gardi-
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ner affirmed to me, by which they will yield green Sciens, or white Buds, and will have small beards growing out. Joyn your Sets together, even in the tops, and set them altogether both upright, and there hold them in their place, till you have filled the hole with good Mould, and set low, but just as the tops may be Level with the Ground, and then after they must be covered thick with fine Mould; be careful you set not that end downwards which before grew upwards, which you may know by the bad growing upwards, and let no part of the dead stalk remain upon the uppermost Joynt thereof; then press down the Earth hard to the Roots. Some will set them every one at a corner of the foot of the Line, which I rather incline to, because they have room, and stand round: But if you plant late, and have green springs upon them, then be careful of not covering the spring; but to set more Plants, lest some should fail, and in a bigger hole, round about the same set eight, some say ten or more, which is thought tedious. Now at this time you need make no Hills at all there, as aforesaid. Poultry must be kept from thence for scratching, the Goose more especially, or any things that are mischievous. Now for poling, if your distance be three yards, or eight foot, then four Poles are required, else three will serve; but I incline to six or seven foot distance, and four Poles, and as many this year as any. Elder Poles are very good, Taper, and Rough, and suitable to the Hops desire. The time of cutting your Poles is in *December*, or in *November*; and then dress them, and pile them up dry; if you leave some Twigs it will not do amiss. For length fifteen foot is well, except your Ground be very rich, or
your

your Hills exceedingly heightned; if they grow too thick, your Poles need to be the longer. The Hop never stocketh kindly, until it reach higher than the Pole, and returneth a yard or two; for whilst it is climbing, the branches that grow out of the principal stalk, grow little or nothing. Let your Poles be strong nine Inches above the bottom, they will stand the faster: 150 Poles make a Load, which may be worth a little more than ordinary Wood, a few will supply the standing stock. In setting your Poles, lay all to each Hill you intend to set, which speeds the work. When your Hops appear, as you discern where your principal Root stands, then set to poling, having a Crow of Iron to make entrance for the Pole: But if you stay longer, then you will be more subject, either by running or making holes, to bruise the Root, or else they will not so easily catch the Pole without flying. Your foot of the Pole must be set a foot and a half deep, and within two or three Inches of the principal Root: But if your Land be Rocky, then you must help your self by making your Hill higher to strengthen your Poles, for which you stay the longer; lest that you bury your Sciens, your Poles of each Hill, leave them rather outward one from another, and then with a Rammer ram them outward, and not inward. If a Pole should break, take away the broken Pole, then tie the top of those Hops to a new Pole, then winding it with the Sun a turn or two, set it in the hole; but if you take a stake, and tie it to, without wresting the Wyers of it, you may do well to piece it; but if it be broken at the nether end, shove the Pole in again; and if your Poles break in the pulling, or will not be drawn, by reason

reason of the Drought or Hardness, you may make a pair of Pinsors of four or five Foot long, with an Iron running Hook upon them, and with a Block laid under upon the top of the Hill, and so cole-weigh up your Poles, the mouth thereof made hollow. And for laying up your Poles, the usual way is to tie two and two together in the top, being set in six opposite Hills, and lay some Hop-bands upon the three Hills, under your Hop-poles, and so draw your tops near together, or farther off, as you see cause. When your Hops are grown two foot high, bind up with a Rush, or Grass your binds to the Poles, winding them about the Poles as often as you can, and wind them according to the course of the Sun, but not when the Dew is upon them: Your Rushes lying in the Sun, will grow tough. Now you must begin to make your Hills, and for that purpose get a good strong Ho, of a good broad bit, & Cut or Ho up all the Grass, in the Bowlers betwixt your Hills, and therewith make your Hills with a little of your Mould, but not with strong Weeds, and the more your Hills are raised, the better, the larger, and the stronger grows the Root, and the bigger will be your Fruit, and from this time you must be painful in raising your Hills, and clearing your Ground from Weeds. In the first year suppress not one Scien, but suffer them all to climb up the Poles, and should you bury the Springs of any one of your Roots, it would die, so that the more Poles are required to nourish the Spring. But after the first year, you must not suffer above two or three stalks to grow up to one pole, but pull down and bury all the rest; yet you may let them grow four or five foot long, and then chuse out the best

best for use. As soon as your pole is set, you may make a Circle how broad your Hill shall be, and then hollow it, that it may receive the moisture; and not long after, proceed to the building of your Hills. Where you begin, and where your Hops are highest, there begin again, and pare again, and lay them to your Hops, but lay the out circle highest to receive moisture, and be always paring up, and laying to the heap with some Mould, until the heap comes to be near a Yard high, but the first Year make it not too high, and as you pass through your Garden, have a forked Wand in your hand to help the Hops that hang not right. Now these Hills must the next year be pulled down, and dressed again every year. Some when their Hop is eleven or twelve foot, break off the tops, which are better than they which have their pole so long as the Hop runs: But if that your Hop by the middle of *July* attain not to the top of the pole, then break off the top of the same Hop; for then the rest of the time will nourish the branches, which otherwise will lose all, it being no advantage in running up to the stock, or increase of the Hop. Now we come to the gathering of them; about *St. Margarets Day*, Hops blow, and at *Lammas* they bell: But when your Hops begin to change colour, it is a little before *Michaelmas*, but long before some will turn, change, and grow ripe, which howsoever the best way will be to pull them, and not suffer them to shed; they are called *Midsommer*-Hops. Let them not grow till the other be ripe, and as soon as the seed of the rest begins to change, then get Pullers amain, and as many as you can, taking a fair season; and note, you were better to gather them too early

early than too late. Therefore for neatness sake, pull down four hills standing together in the midst of your Garden, cut the Roots, pare the same plat level, throw water on it, tread it, sweep it, and make it fat, wherein the Hops must lie to be pickt. Then begin and cut the stalks close by the tops of the hills, and cut them asunder that grow one into another, with a long sharp Hook, and with a Fork take them down; you may make them Fork and Hook, one apt Instrument, with which you may shove off all from the pole, and carry it to the place, and pick them off from the pole. Straight fine poles are best for this way, but cut no more stalks, than you can carry away in the space of one hour aforehand; for either the Sun, or Rain, will offend them when they are off of the pole; they must all stand round the floor, and speedily strip them in Baskets; for it is not unwholesome, though some smaller Leaves fall amongst them. Clear your floor twice a day, and sweep it, and if the Weather be unlike to be fair, they may be carried into the House in Blankets; but use no Linnen, it will be stained to the purpose. And if you pull them upon poles, then lay them upon Forked stakes, and dispatch them, be careful of wet lest they shed their seed, which is the marrow of them, and carry out your straw, and so depart your Garden till *March*, unless it be to bring in Dung. Lay on some in the Winter to comfort and warm the Roots, your old Dung is best, rather none than not Rotten. And in *April*, help every Hill with a handful or two of good Earth, when the Hop is wound upon the pole; but in *March*, you will find, unless it hath been Tilled, all Weeds. But if you have pulled down your Hills,
and

and laid your Ground as it were Level, it will serve to maintain your hills for a long time : But if you have not pulled down your hills, you shall with your Ho, as it were, undermine them round, till that you come near to the principal, and take the upper or younger Roots in your hand, discerning where the new Roots grow out of the old Sets, but cut no Roots before the beginning of *March*, or end of *April*. The first year of dressing your Roots, you must cut away all such as grew the year before within an Inch of the same, and every year after, cut them as close to the old Roots. Those that grow downward are not to be Cut, they are those that grow outward, which will incumber your Garden. The difference betwixt old and new easily appears: You will find your old Sets not increased in length, but a little in bigness, and in few years all your Sets will be grown into one, and by the colour also, the main Root being red, the other white: But if this be not yearly done, then they will not be perceived; and if your Sets be small, and placed in good ground, and the hill well maintained, the new Roots will be greater than the old; if they grow to wild Hops, the stalk will wax red, pull them down, and plant new in their places. As for the Annual Charge of the Hop-Garden after it is planted the Dressing the Hills, the Allies, the Hoing them, the Poling them, and Tying to the Poles and Ordering the Hops, is usually done for Forty Shillings an Acre, together with Pulling, Drying, and Bagging by the Day. And so I proceed to the Drying of them, which may be upon any ordinary Kilne, with any Wood that is dry, but not too old; or else good sweet Rye straw will do

do well, but Charcoal best of all. They must be laid about nine or ten Inches thick, and dried a good while on that side, and then turned upside down, and dried as much on the other side: About twelve hours will dry a Kilne full, which must be followed night and day, then laid up in a close Room upon a heap together for a Month, if your Markets will give you way to frume and forgive again: When the stalk begins to be brittle, and the Leaf also begins to rub, then the Hop is dried sufficiently, but tread them not while they are hot, it will tread them to dust, and then either against *Sturbridge-Fair*, or what other Markets you provide for, you may bag them up close and hard, either to 200 a Quarter. And so I come to my next particular, to shew you the profit of them: One Acre of good Hops may possibly be worth at a good Market, Forty, Fifty, Sixty Pounds; an Acre may bear Eleven, or Twelve Hundred Weight, possibly some have done more, many Ten; but grant but Eight Hundred, they may sometimes be worth not above One Pound Four Shillings the Hundred, and some other times they have been worth Twelve or Fourteen Pound a Hundred, and usually once in three years they bring Money enough. It is usually a very good Commodity, and many times extraordinary, and our Nation may ascribe unto it self, to raise the best Hops of any other Nation. There's an old Saying:

— *Herefie and Beer,*
Hopt into England in one Year.

*Of the Mystery of Saffron, and the way of
planting of it.*

THere is another very rich Commodity, wherein our Nation hath the Glory, and yet it is a very Mystery to many parts of it; they know not whether such a thing grows in *England*; and yet none such so good grows in the World besides, that I have ever heard or read of, and that is Saffron. It is a most soveraign and a wholsom thing, and if it take right, it is very advantagions and costly for price. It hath its ebbings and its flowings, as all other things have. I shall briefly give you the story of it: Good Land that is of the value of 20 *l.* an Acre, being well Husbanded, tilled and fitted, or worser Land being well manured, and brought to perfect Tillage, will serve the turn; but the better, the better for the work. The season is about *Midsummer*, when it is to be set, that being the season when they usually take up, or draw their Sets or Roots, and old store, when they may be had, and no time else. The Land being brought into perfect Tillage, the best way is to make a Tool like a Ho in operation, but as broad as six of them, and with that they draw their Land into ranges, open, as it were a Furrow about two or three inches deep, and there place their Sets or Roots of Saffron about two or three inches asunder (which Roots are to be bought by the Strike, sometimes dearer, and sometimes cheaper, and are very like to Onions, an Onion about an inch and a half over) and as soon as they have made one Furrow all along their Land from one end to another, then they, after that it is set,

set, begin in another, and draw that which they raise next to cover this, and so they make their Trench, and cover the other ; they keep one depth as near as may be, which Ranges, or Furrows, are not above three or four Inches distance, that so a Hoof two or three inches distance may go betwixt them to draw up the Weed, which being set and covered, it may come up that Summer, but it dies again ; yet it lives all Winter, and grows green like Chives or small Leeks. And in the beginning of Summer it dieth wholly, as by the blade of it is to appearance ; let one come and take a Ho, and draw all over it, and cleanse it very well, and then will come up the Flower without the Leaf. In *September* the Flower of it appears like Crocus that is blew, and in the middle of it come up two or three Chives which grow upright together, and the rest of the Flower spreads abroad, which Chives is the very Saffron, which you may take betwixt your fingers and hold it, and cast away all the rest of the Flower, and reserve that only, and so they pick it, and they must pick it every morning early, or else it returns back into the body of it, to the Earth again until the next morning, and so from one to another, for a months space it will bear Saffron. You must get as many Pickers as may overcome it, before it strike in at the very nick in the morning. It will grow to bear a Crop, and then it must be taken up, and planted new again, and then it will yield good store of Sets to spare, which cannot be had any other way. It must be taken up at *Midsummer*, and then Set as aforesaid. And when that you have got your Saffron, then you must set it a drying ; and thus you must do, make a Kilne of

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Clay,

Clay not half so big as a Bee-hive, and very like it will be made with a few little sticks and Clay, and serve excellently well for this service. A little fire of Charcoal will serve to dry it, but it must be very carefully tended. Three pound of wet Saffron will make one of dry. An Acre of Land may bear fourteen or fifteen pounds of Saffron, if very good: But if seven or eight pounds, it will do the work, and one Acre of it will be managed with no great charge. I do not believe it can come to 4*l.* an Acre, it hath been sold from 20*s.* a pound to 5*l.* a pound, It is an excellent advantage, and brings in at worst a saving bargain, but it may possibly be worth 30 or 40*l.* an Acre; but if it come to 7 or 8*l.* it loseth not. The Saffron-Country is (on one side and Nook of *Essex*, and some part of *Suffolk*) at *Saffron-Walden*, and betwixt that and *Cambridge* hath very much of it in their Common-fields: And truly these Lands are but of a middle worth. I have seen as rich Lands again in many Parts of *England*; but it is, as I believe, Loamy Ground, and of a little sadder Nature. It will require to be laid dry and sound, and the Land it self must be very sound and wholesome.

Of the Plantation of Liquorice at large.

I Proceed to another National Commodity, in the Plantation whereof we exceed all other Nations, and that is Liquorice, our English Liquorice, as we call it; being far beyond the Spanish Liquorice or any other The planting of it few understand, and fewer practise. That I may be open, and full in the discovery of it; I shall under two or three Heads,

Heads, formalize what I intend to express. 1. To discover the best Land to bear it. 2. The best way I can find practised to Plant it. 3. The Profits and Advantages of it. The best Land to raise your Liquorice upon, is your richest you can get or make, your warmest you can find out, the soundest and the driest that is possible to be had, of a very deep soil; you must Dig and prepare your Land before you Set, and it must be Digged three Spades deep, and two or three shovelings at the least, laid as hollow and as light as may be: You must have it digged out of Natural Land, if it be very rich Land indeed, that it will feed an Ox in a Summer; it is the best for Eight-pence a Rod at *London*, Forty Rods make a Rood, which is a quarter of an Acre, which comes to about 4 or 5 *l.* an Acre; and this is the main charge of all for three years, there is no more, unless it be a little Hoing, which rids off of the hands very fast; I believe it will not cost above 20 *s.* an Acre more in all the three Years, both in Setting, and all the Dressings of it, besides the Sets and Land: The Sets being doubly, trebly, worth your Money. Sets have been sold for 2 *s.* the Hundred; but if your Land be not fresh Land, or extraordinary rich, and as rich as your best Gardens are, it must be made so with Soils and warm Manures. Horse dung is excellent to be Intrenched into the Earth, it both warms and lightens it, and makes it fit for this service. About *London*, are very serviceable Lands for it, and so is any dry Soil whatsoever, where it is rich enough and deep; that which bears this well, will also bear your Moulder Weed, that rich Commodity. Having digged and prepared your Land, you may proceed to the planting of it, and therein

you must endeavour to get the best Sets you can, and from the best and largest sorts of Liquorice. The best Sets are your Crown-sets, or Heads got from the very top of the Root, a little shived down; be careful of this, of very sound Land; for how soon soever you come to water, your Liquorice will check and run not one Inch further: And having procured your Sets, your Ground being cast into Beds of four foot broad, all along your Plantation, from one end to another, with a long Line, you may lay down a Set at every foot along the Line, which Line may have Knots and Threads at every foot, if you will be so exact, and then a man may come with a Tool made a little flattish or roundish, of the breadth or bigness of a good Pickforks tail, about half a yard long, with a Crutch at the over-end, and sharp at the nether, and that thrust into the ground, it being made of Wood, or Itch: But if flat, an Iron will do best, and open the hole well, and put in the Set, and close a little Mould to it, and so you may over-run an Acre very quickly in the setting of it, and if it should prove a very dry time, you must water your Sets two or three days at the first, until that you see that they have recovered their withered waneiness; and then the first year you may plant your Garden with Onions, Radishes, or any Sallet-herb, or any thing that Roots not downward, and I am confident it would be better too, because it will prevent some weeding; and for the second, it must be Hoed and kept from weeds too, and a little the third; but one thing be very curious of, in the taking up, and sudden setting of thy Sets, as soon as took up, set again; but if you fetch from far, then as soon as taken up, put a little Mould,

Mould, and poste them away by Horse-back, and get them into the Ground as soon as possibly; the delay of setting spoils many thousand Sets. The seasons of planting is in the Months of *February*, and *March*: You may the second Year take some Sets from your own stock; but be very curious thereof: But the third year you may take what you please, and in the taking of the Liquorice up, the best seasons for which is *November* and *December*, there will run from every Master-root, a Runner, which runs along the over-part of the Ground, which hath little sprouts and Roots or Sciens, which will yield excellent Sets, if they be cut three or four of them in every Set, which may be about four or five Inches long, which is also to be planted, and is as good as the Crown-set; also if it be any thing a moist time, you may take slips from the Leaf or Branches, and set them, and then some of them will grow; but they may be set betwixt the other to thicken, lest they should fall. The third Particular, is the Profit and Advantage that may be made thereby, which is very considerable; but it is also subject to the Ebbings and Flowings of the Market. It must be taken up in Winter, and must be sold as soon as taken up, lest it lose the weight, which it must needs do: You may make of an Acre of indifferent Liquorice 50, or 60 *l.* Land of excellent good, 80, 90, or 100 *l.* It is not of so great use as other Commodities are, and so will not vend off in great Parcels, as others will, neither will it endure the keeping for a good Market, because it will be so soon dry.

*How good a Commodity Hemp is, with the
manner of Planting of it*

Hemp is an excellent Commodity, and would be far better, but that it is not made so National. This Staple-Commodity in the product would bring a constant profit for the stock, & would maintain the poor at work, so as to get a competent Livelihood. Why should we run to *France*, to *Flanders*, and to the *Low-Countries*, for Thread, and Cloth of so many sorts, and fine Linnen, when we have Hemp and Flax enough of our own? I shall now proceed to a brief Description of the way of raising it. As for the seed of it, that is familiarly bought and sold in all places, in the season, but the best seed is your brightest, which you may try by rubbing of it in your hand; if it crumble with rubbing, it is bad; but if it still retains its substance and colour, it is good. The best Land for it, is that which is Sandy, or a little Gravelly, so it be very rich, and of a deep soil: As for your cold Clays, they are not fit for it, the very best Land can be pickt for it, is but good enough. The quantity that is to be sowed upon our Statute Acre, is three Strikes, or Bushels, and Harrowed with small Harrows, the which after the Land is made exceeding fine, as the finest Garden; then in the beginning or middle of *April*, is the time they sow it: Some sow it not till the end of *April*: But if it be any thing a kindly Year, the earlier the better, and so preserved exceeding choicely at first, for fear of Birds destroying of it, as you see in many Countries. Be careful that Cattel never bite it, nor lie upon it, for they will

will destroy it. The season of getting it, is first about *Lammas*, when a great part of it will be ripe, it may be about one half, that is, a lighter Summer-Hemp that bears no seed, and the stalk grows white and ripe, and most easily discernable, which is about that season to be pulled forth and dried, and laid up for use, or watered and wrought up (as all good House-wives know) which you must pull as neatly as you can from among all the rest, lest you break it; for what you break, you utterly destroy, and then you must let the other grow for seed until it be ripe, which will be about *Michaelmas*, or a little before. When seed and stalk are both full ripe, and you come to pull them, you bind up in bundles as much as a yard-hand will hold, which is the Legal-measure; but for your simple or Summer-Hemp, that is bound in lesser bundles, as much as may be grasped in both your hands; and when your Winter-Hemp is pulled, you may stock it up, or barn it, any way to keep it dry, and then in the season of the year, thresh it, and get out the seed, but still preserve your Hemp till you set to the working of it, which instead of breaking and tawing of it (as they do in most parts) there they altogether peel it, and no more, and so sell it in the Rough: But I leave all at liberty for that, whether you peel or dress it up by Brake or Tewtaw. As for the Seed an Acre will bear, is two or three quarters, and it is usually sold for about a Mark a Quarter, sometimes ten shillings. If good Hemp, then store of seed, else not; but in many and most parts of the Nation, it is sold for about four shillings a Bushel: your Fimble-Hemp is not worth above half so much as the other; sometimes it is subject

to Weeds, to Carlock, and Muckle-weed, which must be weeded; but the best way to destroy them, is to let your Hemp-land lie one year fallow: I only speak of *Holland*, the cheapest place for it, and the first fountain of it: But generally throughout the Nation, it is of far more worth and value. The richer your Land is, the thinner, the poorer; the thicker you must sow. One Acre of good Hemp may be worth 5, 6, 7, or 8 *l.* an Acre, and sold as soon as pulled or gathered; but if it be wrought up, it may come to 8, 9, 10, or 12 *l.* or more: It is a common thing in use, every one knows the manner of working it to Cloth.

*The Husbanding of Flax so as to make it come up to as much of the Improvement as we can.**

Flax, as I may call it, is a Root, or foundation of advantage, upon the prosperity whereof, thousands of people in good, honest, and laborious Callings, are maintained; for the profit accruing thereof, is both general and particular. For the Land capable of raising good Flax, is any sound Land, be it in what Country soever it will, if the Land be good, either earthy, or mixed of Sand or Gravel, and old Land; it is best, that hath lain long unplowed, it had need come up to the value of a Mark, or near twenty shillings an Acre to sow Flax upon, within a mile of *London*; and yet in most Counties of *England*, I know as good and as kind Land for that Husbandry, as any other; and at *London* they have Workmen dearer too, and yet can raise (though they give so dear) a very considerable profit. There is excellent Flax about *Maidstone* in *Kent*, 'tis said the best Thread in *England*.

land is made of it; one Acre of good Flax may maintain divers persons, to the compleating of it to perfect Cloth; consider how many Trades are supplied thereby. 1. The Flax Land must have the same Husbandry of plowing and sowing, as Lands have for Corn; there's the Husbandmans business sometimes, yea, many times weeding too, then pulling, stiching, and drying, then repelling, and laying up, and preserving the seed, then watering is either on the ground or in the water, then drying of it up, hoing of it, then breaking and tewarting of it, then better helling and dressing it up, then spinning of it to Yarn or Thread, then weaving it, and bleaching, and then it returns again to the good Housewives use, or Sempster, and then to the weaving and usage; and all these a dozen good Callings. 2. For the carrying on of this design, and making the best of this Improvement, I will here give you the best and most profitable way of planting of it, that is discovered. As for the Land, let it be good and well ploughed, both straight and even, without balks, and in due season, about the beginning of *March*, or latter end of *February*: and as for the Seed, the true East Country-seed is the best, although it cost very dear; one Bushel of it to sow, is worth ten Bushels of our own Country-seed; but the second Crop of our own, of this Country-seed, is very good, and the third indifferent, but then no more; but again to your best Seed: The quantity of it is, about two Bushels of it upon an Acre at least, some sow a Peck more; but I conceive two may be enough, but of our Seed it will require half a Strike more than of the East Country-seed: Our Flaxmen

men in former daies did not sow above half so much, or little more; but now Experience hath brought us to this pitch. The season of sowing it, is a warm season, in the latter end of *March*; but in the warmer parts, as *Essex* and *Kent*, I conceive mid-*March* may do well; but in colder parts, as down towards *Warwick-shire* and *Worcester-shire*, the beginning of *April* may be early enough; and if there should come a very wet season, you must take care of weeding it also, that it grow not till it be over-ripe, lest the stalk should blacken or mildew; yet to its full ripeness you must let it grow, the which you may perceive, both by the hurle, and by the seed. Some will ripen earlier, and some later; but against it be ripe, be sure to have your Pluckers to fall in hand with plucking of it, and then tie up every handful, and set them upright one against another, like a Tent, till they be perfectly dry, then get it all into the Barn. It is indifferent whether you ripple it, or take off the boles of it, as soon as you bring it home, or when you intend to use it. As for your watering of it, whether in the Water or upon the Land, that I shall not peremptorily determine; but thus much I say, that both may do well, and he that gets store, will find use of both, because of the one you make use as soon as your Flax is pulled, and then you need not stand so curiously upon the drying of it; but after you have got your seed, you may water it, and the watering of it opens and breaks the hurle the best; but then you must be careful of laying up your seed, that it heat not, nor mould, and that which you water then, get it forth upon your Grass Land, and spread it thin, and turn it to preserve it from mildewing

dewing, and keep it so until you find the hurle be ready, and willing to part from the Core, and then dry it up, and get it in for use. And for the drying of it, a Kilne made on purpose is best, so that you be careful of scorching it, this will make a greater riddance of the same, and to them that have great store, Sun-drying will never do the feat, though it may do well for a small quantity, or the Flax of a private Family. As to the working of it, you must provide your Brakes and Teutaws, both, the one, that is, the Brake which bruises and toughens, the Hurle and the Tewtaw that cuts and divides out the Core: if you use the Tewtaw first, it may cut your well-dryed Flax to pieces; yet both doth well, but use the Brake first. It will cost the Workmanship of it betwixt three or four pounds an Acre, to bring it up to Sale: It lieth much upon the Workmans hand, and therefore far more to be advanced, by how much the more it raiseth employment for so many people to live by. Where Wages are great, it comes off the hardest; yet where it is carried on to the purpose, people stock hard that want Work, and because of constancie, will work on easie terms, or else how could they possibly do good of it at *London*, or near about it, where they work at double Rates? but there I have seen the best Flax I ever saw. Lastly, the benefit that may be made thereby, an Acre of good Flax may be worth upon the ground (if it be the East-Country seed) seven or eight, yea, possibly ten or twelve pounds, yea, far more, the charge whereof, besides the seed until it be ripe, may not be above ten shillings an Acre, which if you work up to be fit to sell in the Market, it may rise up to 15 or 16,
or

or near 20*l.* in the Market ; but to bring it so high as 30*l.* as in *Flanders*, I dare not say. But an Acre of our Country-seed, will hardly come up to above three pounds or four, unless very good indeed, to which if it amount, and no more upon the Land, it will make a good advancement of it; which it may be, Land, and Seed, and all Charges, may come to about fifteen or sixteen pounds an Acre, the seed not being worth above two shillings a Strike.

A discovery of Rape and Coal-seed's Husbandry.

THe planting of Coal-seed, or Rape-seed, is another excellent good means for the Improvement of Land : This Coal-seed hath been of late daies in good esteem. And it is most especially useful upon your Marsh-land, Fen-lands, or upon your new-recovered Sea-Land, or any Lands that are very rank and fat, whether Arable or Pasture. The best seed is the biggest, the fairest seed you can get, it being dry, and of a pure clear colour, of the colour of the best Onion seed. It is to be had in many parts of this Nation ; but *Holland* is the Center of it, from thence usually comes your good seed. The season of sowing it, is about *Midsummer*, you must have your Land plowed well, and laid even and fine, then you may sow it ; about a Gallon of seed will sow an Acre, the which seed must be mingled (as afore was directed about the Clover) with something that you may sow it even, and not upon heaps. The even sowing of it is very difficult ; it grows up exceedingly to great Leaves.

Leaves ; but the benefit is made out of the seed especially. You may sow it either upon the Lay, Turfe, or Arable, and both may do well ; but your Arable must be very rich and fat, having made your Ground fine and fit to sow it. The time to cut it, is when half the seed begins to look brown ; you must reap it as you do Wheat, and lay it upon little Yelms, two or three handfuls together till it be dry, and that very dry too, about a fortnight will dry it, it must not be turned or touched, if it be possible, for fear of shedding the seed, that being the chief profit of it : It must be gathered in sheets, or rather a great Ship-sail Cloth, as big as four or six sheets, and so carried into the Barn erected on purpose, or that place on purpose designed to thresh it that day ; you may have sixteen or eighteen men at a Floor, four men will thresh abundance in a day. I have heard that four men have threshed thirty Coomb in a day. The seed is usually worth 10 s. a Coomb, that is, four shillings a Bushel, sometimes more, and sometimes less. It will, if exceeding good, bear Ten Coomb upon one Acre, and raise a good Advance upon your Lands. It is a Commodity will not want of Sale, the greater the Parcel is, the better price you will have. It is used to make the Rape-Oyl, as we call it. The Turnep-seed will grow amongst it, and it will make good Oyl also, you may sell a Thousand pounds worth together, to one Chapman : It is best to be planted by the Water, or near it. It cannot be too rank, the Eadish and Stubble will exceedingly nourish sheep in Winter. It hath another excellent property, it will fit the Land so for Corning ; for Wheat it may produce a Crop as good, or better than it self, and for Barley after it.

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The Charge of the whole Crop, I conceive may come to be betwixt 20 or 30 s. an Acre, and a good Crop may be worth 5, 6, 7, or 8 l. an Acre; the least is a very good Improvement, because it will do excellently well, if well ordered (and a kind season upon the Land, the very first year after Recovery, when it will do nothing else, if it can be but plowed) when other things, as Corn and Grain may be hazarded.

Of Weld or Would, as some call it, or more properly Dyars-Weed.

IT is a Dyars rich Commodity, it beareth a long, narrow greenish, yellow Flower, which runs to a small Seed, far smaller than a Mustard-seed, very thick set with seed. *Pliny* calls it *Lutea*, but *Virgil* calls it *Lutum*, and in our English, *Weld*, *Would*, or *Dyars-Weed*. It flourisheth in *June* and *July*. In many places it groweth of it self, in and about Villages and Towns, and is of a very great use, and considering the easie charge of the raising of it, and the hardnes of the Land upon which it grows, is of incomparable advantage. For first it will grow upon every indifferent Land, not worth above ten groats or half a Crown per Acre; yea, as some affirm, the veriest hilly, barren, chalky, light Land, not worth 12 pence per Acre will carry it, and bear it to very good purpose; but unto so barren Lands, I will not give encouragement, unless where there is little or none better; but in any indifferent Land, so it be of a very dry, warm nature, it will do very well. And secondly, it will cost but a little the managing, it requires no Tillage at all, no Harrowing, it being

to be sowed where you sow your Barley or Oats, upon that Husbandry, without any other addition, unless you draw a Bush over it, or a Roul, either of which is sufficient to cover it after you have sowed it. The difficult piece in the managing hereof, is the very sowing of it, that is, that it may be sowed even; for the seed being so very small, will require both skill, and an even hand to scatter it: Some sow it by taking it with one finger, and the thumb; others with the two Fore-fingers, but neither of these do I affect as the best way, because they cannot spread so well as they may with their whole hand: I therefore prescribe a mixture with Ashes, Lime, fine Earth, or some such thing as will best suit with the weight of the seed; for could you find out that which agreeth both in weight and bigness, then out of all question, none like to that to sow it withal. A Gallon of this seed will sow an Acre, which had need to every quart of seed, to have two Gallons of some of the aforesaid. It must be often stirred together, lest that the seed sink to the bottom, and sow that part thicker than the other, and then cast it out at Arms-end, at as good and even compass as you can. The seed thus sowed, may grow up amongst the Corn, and yet be no prejudice, because it groweth not fast the first Summer; but after the Corn is cut, it must be preserved. And the next Summer you shall receive (through Gods Blessing) a comfortable Crop: You must be exceedingly curious in the ripening of it; if you let it grow too long, your seed will fall out; if not long enough, your seed will not be perfect, nor your stalk neither, and therefore observe both the turning of the seed, and the ripening of the stalk; for

I cannot tell you which of either will admit of a dispensation; and as soon as ever you perceive it to grow up to perfect ripeness, you must down with it, that is, pull it as you do your Flax, up by the Roots, and bind it in little handfuls, and set it up to dry in little filches or stich, until both seed and stalk be dry, and then carry it away carefully, as that seed be not lost; lay it up dry, and so keep it as you see cause; for a good Market; for it is to be sold for the Dyers use, who sometimes will give a very good price, but at all times sufficient profit, and go far to buy it, from forty shillings an Acre, to twelve pounds an Acre; some say more; you may barn it up, and keep it, and the seed together until *March*, and then you may get out the seed by lashing and whipping of it forth upon a Board, or Door, which reserve for seed: The seed is sometimes Ten shillings a Bushel, and sometimes more or less, as the Market rises or falls, it coloureth the bright-Yellow, and the Limon-colour. The Stalk and Root are both useful, and must go together to the Dyer. The Charges of sowing, and all things till you come to pulling, is not above one shilling, whipping and barning may come to four shillings more; the seed may be worth half a Crown, so that all Charges and Rent of the Land may amount to less, but I will say Fifteen shillings, then the Improvement will be four-fold; if worth Four pound Ten shillings an Acre, six-fold; if worth six pound *per Acre*, eight-fold, and much more, as some affirm to sixteen-fold Improvement. It begins well, and spreads and thrives very much in *Kent*, in many parts thereof; the best place to get the seed is in *Kent*, clean down to *Canterbury*, and *Wye*,

Wye; where you may see both the Land and the Growth, and discover the Myserie thereof. It is sold by weight, so much a Hundred, and so much a Tun weight.

Of Woad, or Wade, the Land best for it, the Usage of it, and the Advantages thereby.

WOad is also a great Commodity, it lays the foundation for the Solidity of many Colours more : A Woaded Colour is free from staining, excellent for holding its colour, nay, sad holding colour must be woaded. It hath been one of the greatest Inrichments to the Masters thereof, until our late Wars, of any Fruit the Land did bear. It is called *Glaſtum*, or Garden-woad, by the *Italians* called *Guedo* ; in *Spanish*, and in *French*, *Pastel*, in *Dutch*, *Wert*, and in *English*, *Woad*, or *Wade*. It hath flat long Leaves like *Reben Rubrum* ; the stalk is small and tender, the Leaves are of a blewish green colour. The Seed is like an Ash-key, or seed, but not so long, little blackish Tongues. The Root is white and simple. It is a very choice Seed to grow, and thrive well ; it beareth a yellow Flower, and requires very rich Land, and very sound and warm, so that very warm Earth, either a little Gravelly, or else Sandish, will do exceeding well ; but the purer, warmer, solid Earth is best, and exceeding rich Land, and though it should be mixed with a little Clay, it will do well, but it must be very warm. There is not much Land fit for this design in many Countries, especially your hardest Wood land parts, you have in many of your great, deep, rich Pastures, many Hills and Hills-sides good

O

Woad-

Woad-Land, when the Bottom-ground will do no service; but your chiefest is your home Corse, or lesser Ground lying near, and bordering about the Towns. Your best and Naturallest parts in *England* for Woad, are some parts of *Worcester-shire*, *Warwick-shire*; Southward, *Oxford-shire*, *Glocester-shire*, *Northampton-shire*, *Leicester-shire*, some parts of *Rutland*, *Bedfordshire*, and *Buckingham-shire*, and some other places here and there: All these Parts have some admirable Woad-land in them. The Land must be sound, and at above twenty shillings an Acre to graze in at least, or else it will not be worth the woading. And to plow and sow woad, it may be worth as much more as to Graze, yea, sometimes more, if it be extraordinary rich Soil, and Trading good. And whereas some write, that it undoeth the Land; I answer as I judge in my own Breast, that in regard it is so often cut, and groweth so thick, and is so often weeding, that it must needs do so, as I believe all Corn doth draw out some of the Spirit thereof; but no more than other Grain, if it could be so oft cut to grow again. Thus much I can say of it, that it prepares the Land exceedingly for Corn, and doth abate of the strength and super-richness, or Rankness thereof, which Corn would not well endure; for I am ready to maintain, that the richest Land is not best for Corn: For though the one may over-burden and be so Rank; yet the other may bear as much to the Strike; and for Goodness, your Middle-Land beareth the Bell away for Corn, in my opinion.

To acquaint you with the use of Woad, I must do these three things. 1. Shew you how the Land must be prepared and sowed. 2. Shew you how
it

it must be ordered, when that the leaf must be cut, and how ordered after the cutting of it. 3. And lastly, how it must be tempered and seasoned to make the best Woad for use and profit: But before I proceed, I must inform you, that this commodity is not to be played withal, as you may do with Liquorice and Saffron, &c. to make Experiments of a little parcel; but a man must of necessity set forth and forward so much stock, and Land, and seed, as may keep one Mill or two at work to make it into perfect Woad. It is the doing of a great quantity, and carrying on a great stock that makes this work, and will carry it on to profit and credit: Some have as much under hand, as will work six or eight Mills. The charge of it is exceeding great in the management of it, and as well it payeth for all charges, as any Commodity I know of. The Ground must be of old Land, as aforesaid, and a tender Turfe, and must be exceeding choicely plowed, if very hilly, they must be cast, and well cast, that that you cast forth, lye not high to raise the Furrow: They us ally plow outward, or cast all their Lands at the first plowing, and having broke the Ground with a Harrow, then they sow it, and sow about four Bushels or Strikes on an Acre, which done, then cover it, and harrow it very well and fine, and pick out the Clots, Turfes, and Stones, and lay it on the hollow places of the Ridge in heaps, as is the usual custom: But now I should rather chuse to take a little Cart with one Horse, and as the Boys and Children pick them up, cast them into the Cart, and carry them into some flank and hollow place, and lay them down to rot, or else mend some barren place, because they lose a good considerable

part of Land, and so of Woad too, which otherwise might be as good as the rest, and is now, by reason of the times, not worth so much. The Land that is lost is very considerable, in regard it is so good of it self, and the stock so good and rich that is sowed upon it, that all even Ground had need be regained, that possibly may be. 2. I am to shew you how it is to be husbanded, and when the Leaf must be cut, and how used, and how oft, &c. After the Land is sowed, and that it begins to come up, as soon as any Weed appears, it must be weeded, yea, it must be twice weeded, or more, if it requires before it be ready to cut ; but if it be special good, and comes thick, and cover the Ground well, it will ask the less weeding : To them that are exercised in this same Service, and have their Work and Work-folks at command, they will have it weeded for eight pence an Acre, and sometimes less: as soon as the Leaf is come to its full growth, which will be sometimes sooner, sometimes later, as the year is drier or moister, more fruitful or less, which when you perceive at the full ripeness, set to cutting of it off. As soon as ever it is cut, your Mills being prepared, and great broad Fleaks, so many as may receive the Crop prepared, and planted upon Galleries or Stories made with Poles, Fir, Alder, or other Woad ; your Mill is usually known, a large Wheel both in height, and breadth, and weight doth best, it is a double Wheel, and the Tooth or Ribs that cut the Woad, are placed from one side of the Wheel to the other, very thick, wrought sharp and keen at the edge, and as soon as the Woad is cut, and comes out of the field, it is to be put into the Mill, and ground, one Kilne full after

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another as fast as may be ; the Juice of the Leaf must be preserved in it, and not lost by any means, and when it is ground, it is to be made in balls round, about the bigness of a Ball, without any composition at all, and then presently laid one by one upon the Fleaks to dry, and as soon as dried (which will be sooner or later, as the season is) they are to be taken down, and laid together, and more put in their places : But because all the circumstances will be too tedious to discourse, and the work is no common work, and very many not well versed therein, I will rather advise you to get a workman from the Woad-works, which can carry it on artificially, rather than to venture the experimenting of so great Work upon Words and Rules. Good Woad may yield in a plentiful year five, or possibly six Crops, yea, ordinarily four, and yet sometimes but three ; But the Winter-Crop is of good worth, excellent for Sheep, conceived good against the Rot, and also it will maintain them well, and it will contain them in good heart, and strengthen them till sowing time again. The time of sowing is in the beginning and end of *March*. And thus when you have cut all your Crops one after another till Autumn. The declining season will not ripen it again, and your Mill is at leisure, then you must proceed to the third Particular, which is to the ordering and seasoning of it, and working it up to use, which must be done in the manner following : You must set your Mills to work again, to grind it all over, and then season it up, and so you may make it stronger or weaker, as you may see occasion. There is so much difference betwixt Woad and Woad, that the Dyers, though so experimen-

tal, will hardly buy you any parcel till they have experimented it in colouring; and therefore for me to prescribe a Rule upon such uncertainties, I hold it not safe, the Woad-man that uses to make up three or four sorts of Woad, will make it up as he intends to befriend a Customer. The first years tryal will put you into sufficient Experience: As the Woad yields many Crops, so each Crop is worse than the other; the first Crop is best, the second next, the third much worse, the fourth far worse than that; and the fifth worst of all: if you get a fifth, but that is not usual, four Crops is sufficient, and sometimes you must be content with three, and as the first Crop is usually (in a good year) ripe by the midst of *June*, so will the second be usually ripe in one month after that, and so every month, or thereabouts, each Crop will be ready, and if the latter end of the year prove kind, then you must expect a Crop the more. Now to know when the Woad is ripe, and to take it in the very season, is a fundamental piece, which is when the Leaf is come to a full growth, and retains its perfect colour and lively greeness, then with all your might set so many hands to cutting of it, as that it do not fade or wax pale or wan, before you have cut your Crop; for then it will begin to be over-ripe, and the less sap and marrow of it drinks in again, and will not yield store of Juice, which is the spirit of it, and best of the Woad. The Woad-man seasons the two first Crops together, and some season the third by it self, and the fourth by it self; some put the three first Crops together, which makes the worser Woad, but the very Virgin-Woad is the first and second, and the better they desire to make it, the more

more intire they compound it, not confounding it with divers sorts. The manner of seasoning is thus; after every Crop is cut, grinded, balled and dried as dry as possibly it can be, and laid up in the Ball, every Crop by it self, then you must take the first and second Crops, and grind them all over again together, or apart, as you please, but they must be then wrought as dust, as it were, in the Mill, and ground very well the first and second Crop, or so much as you will make of your best sort of Woad, and so laid upon the floor in a heat or Couch, and then you must mix it with water, and turn it over, and mix it again, and turn it over, and give it so much water as that it will be soakt throughly, however you may over-soak and drown it, and that will be very prejudicial to it: It must be turned in the Couch once for three or four weeks together, and then every other day once for about a fortnight, and then twice a week till it comes to a right colour. At the first many men must be employed, carrying water as hard as they can, till it be wet and well soaked, and that you may know the better how to temper it aright, you shall find it heat exceedingly in the Couch, which you must look to keep in a moderate condition, which overheating you may prevent with turning, that it overheat not by any means; it may grow so hot, as you can possibly abide your hand in it, but not to exceed that heat: And how to know it seasons kindly, and so will in time come to perfect rich Woad; you must observe that it will alter and change divers times: First it will hoar, mould, and frost, and smell exceeding strong, and then it will in a little time abate thereof, and grow towards a

colour, and then it will hoar, and mould again, and change a little whitish, and after this second change it will come to a perfect black, which the brighter and clearer colour, the better. This must be the Winters work, and it will be good for cold weather, and when it is thus wrought, and comes to its colour, then you may lay it up, or heap it up, to lye for a Sale, putting divers Poles into each heap, into the bottom, to open and keep it cool, and you must be sure it take not heat again; and thus all your sorts of Woad must be seasoned one after another, and especially all such that you can dry that Summer: But to tell you how to chuse the best Woad, is scarce in the power of the Woad-man, who can but guess at it from that experience he hath in the mixing of it; but it must be tryed by the Dyers, who, as we said, usually do so before they buy it. I shall end with the advantages thereof, which are very great. And first it is National, in that it sets many poor on work, It is the staple and chief of the Dyers Trade, layeth a foundation for all enduring and holding Colours, and much advantages Land in the Rent, it doubles or more, and in the usage of it upon this Husbandry, trebleth or quadrupleth it, and many times more: And then secondly, it is personally advantagious, the best Estates that have been got in all our rich upland Countries, have been got by it: At some seasons, and when they have a right Crop and good Markets, it will amount to as much more; it hath been sold from 20 to 30 *l.* the best Woad, and back again down to 6 *l.* a Tun.

The Nature, Use, and Advantages of Madder.

AND so I descend to my third Dyers Commodity, in relation to Dying, or Colouring ; and that is to the Story of Madder, that colours the rich and best solid red. It is now very rarely planted in Gardens, and in some small Plats of Ground, and it amounts to the very great advantage of the Planters, that Set and Sell forth by the Roots they draw, to vend to the Apothecaries, and Medicinably to others ; they make a most exceeding value of the Lands beyond all Credence : Some have made, as I have been informed, after the Rate of Three Hundred pounds an Acre in three years, for so long as it grows, before it come unto perfection ; and others that have sold it by whole-sale, a parcel together at the worst Advantage, to an Hundred and sixty pounds an Acre, and some have out of small Plats of Gardens, made more than I have, or will here affirm ; and however this being a fundamental Fruit, and such a one as that the plenty thereof will not much abate the Market, or dying Trade, being supplied herewith from beyond the Seas, that the Erection of such a Plantation as may bring it forth, wrought up and fitted to the Dyers use, and so to be a supply to our selves within our selves : It would be a good design to the Nation, as it Impleys so many hands to bring it to perfection. It turns Land to as great an Advantage as any Seed or Root that is capable to receive it, and needs no more fear want of Markets for the Vending of it, than we need for Wool, that Staple-Commodity of the Nation. I shall proceed to the Description of it. There is but
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one kind of Madder, which is Manured and set for Use; but there are many things like thereto, as Goose-grass, soft Cliver, Ladies-Bedshaw, Woodroof, and Crosswort: All which are like to Madder-Leaves, and are thought to be wild kinds thereof. It hath long stalks, or trailing Branches dispersed upon the Ground, Rough, and full of Joynts, and every Joynt set with green and rough Leaves, in manner of a Star; the Flowers grow at the top of the Branches, of a faint yellow colour, after which comes the seed round and green: The Root creepeth far abroad within the upper Crust of the Earth, intangling one Root into another, and when it is green and fresh, the Root is of a Reddish colour, it is small and tender, but gathers and runs into the ground, just like an Ivy along a House or Tree. It is a Commodity of much value, Patentees strove hard for it, and Patents were gained about it in the late Kings days. For the making out of a good Plantation, I must observe these three things. 1. Shew you what it comes of, how to plant it and preserve it. 2. How to get it and use it, to bring it to a saleable Madder. 3. The benefit and advantage of it will be National and Personal. Although it bear a seed, yet that seed comes not to perfection, it is therefore to be planted from the Sets that are to be got from the Madder it self, and they are to be bought in many Gardens in *London*, who keep up that Plantation for the advantage of selling their Sets, and Roots Physically to the Apothecaries only; all the skill is to distinguish of the goodness thereof: And for the discovery thereof, first know the season of getting, or rather drawing them, which is in *March*, and *April*, yea, as soon as

as they are sprung forth of the Ground two or three Inches long, then you must be careful to get Sets rooted; every Set having some suckers, or spinies of Root going out of them: They must be slipped from the main Root, and these Sets as soon as ever took up, put into some Basket with a little Mould, and posted to the place where they are to be set, the sooner the better; and then your Ground being very rich, it cannot be too rich for this Commodity, however it must be of a warm and a very deep Soil, and digged two or three Spades graft depth, and two shovellings also, raked and laid Even and Level, and then by straight Lines trod out into long Beds about one foot broad from one end of your Work unto the other, and set about one foot asunder every way; and if it be a dry spring, they must be kept with watering, until they recover their fading wan condition. You may begin to dig your Ground in the beginning, and along all Winter, till the very day of setting, and then you must keep it with Weeding and Hoing, until it have got the Mastership of the Weeds, and then it being a Weed it self, will destroy all others. One Rod of Ground is worth seven-pence a Rod digging; or if very dry strong Ground, eight pence; but six-pence the best. You may sow some early Sallet-herbs, as Radish or Onions, or such things as will be ripe betimes, amongst it. The first year good weeding is the best preservative unto it, and in your setting them by a little Line, one goeth before, and laieth every Set in his place, and another comes, and with a broad Dibble made for the purpose, thrusts down a deep and open hole, and puts in the Set, and for the nourishing of it, in case any die, you must plant
new

new in the room of it ; for the time of the growing of it, until that it come to perfection, is three years: The first year you may take off some few Sets, here and there, but that is somewhat dangerous ; for that year, it must be kept with Hoing a while also, then the second year you may take up Sets as fast as you will, and almost as many as you will, leaving but as you do in the Cropping of an Oak, the bough for the drawing up of the sap out of the Root, being so thick and strong in the Ground, that nothing will almost decay it. If then you can get it for the use of the Drugsters and the Apothecaries, and the Set to plant again ; in the taking up of every Root, there will be one Runner which hath little Buds on it, which may be divided and cut into a fingers length, each planted with one Bud out of the Ground, set upright, which makes very excellent good Sets, one Runner will make many Sets; but these Sets cannot be got up until the Madder be taken away: And having thus preserved it until it come to a good Crop, having curiously dried it as you do your Hops, to a just and perfect gage of drought. There is a Mystery, that is, to pare off the husks, that it may, if it be possible, as the Wheat is ground, be flaked, or flayed, that it may go all one way, which sort they call the Mull-Madder, is little worth, not above nine or ten shillings a hundred; and then you must take out the second sort, called the number O, which is the middle Rinde, and is not worth so much as the third sort, called the Crop Madder, by one sixth part; and this Crop-Madder is the very heart and pith of it, inclining to yellow ; this is lesser in quantity, but little, better in quality by far. Sometimes the
best

best Madder is worth 8 or 9 *l.* a Hundred, and the number O, is worth 6 *l.* 6 *s.* 8 *d.* sometimes it is not worth above 4 or 5 *l.* a Hundred. Some Dyers use of this Commodity, above an Hundred Pound a Week a man. Now as it is planted in Gardens, unspeakable advantages are made thereby, and should it hold a proportion when it comes to be made up, and compleated to the Dyers, it would prove the richest Commodity that I know sowed in *England.*

T H E



THE YOUNG GENTLEMANS

Heroick Exercise;

OR THE

Perfection of Horsemanship ,
Drawn from Nature, Art, and Pra-
ctice of Riding.

BEfore I enter into the Unfolding of the Parts of this Art, I do think it fit to shew the Natural Instinct and Temperature, that ought to be in every Perfect Rider. He must be a Person void of Fear ; for, the true Properties of his Fortitude should be to Guide his most noble Nature, through hard and difficult things, to the Attaining of the End of his Heroick desires ; because the perfection of every good Undertaking consisteth in this, that it be done by a staid and constant Reason, without Rashness. And because every Rider is a reasonable Creature, he therefore ought to be able
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to yield a constant reason without any Contradiction, as not subject to any prejudice of the Inquirer. for that he only teacheth by Reason for what he doth, an Inherent property peculiar to Man; yet it cannot be truly said, that every Reasonable Man is a perfect Rider, because every man hath not attained to the reason of the Art, and therefore unable to teach, *Nam quod nemo dedit, nemo docere potest*: For no man can Teach what he hath not Learned. And though it may be confessed, that every good beginning cometh unto us by Nature: yet the growth and progress thereof, we attained unto by Precepts of Reason, and the accomplishment by knowledge and Practice: For Nature without Knowledge is blind, Knowledge without Nature falls short, and Practice without the former is Imperfect.

From hence it proceeds, that unless Nature, Art, and Practice be conjoyned, it will be impossible to be a good Rider, to be able to know how and when to help his Horse, the only principal things required in a Rider that is enriched with Nature, Art, and practice; and yet if he be so qualified and bestow all his Labour and Skill upon a Jade; let him assure himself he shall *Oleum & operam perdere*, but lose his Labour. For although every Horse be a sensible Creature, moved by Sense and Feeling, as things proper to his Nature, and taketh his Instruction by Speech, as Man instructeth Man; which is either by encouragement, or cherishing him when he doth well, or by Punishing him when he resisteth his Discipline; yet nevertheless when a Jade begins to be taught, and proceeds with a continual perseverance therein, yet shall he never attain the perfection of Action, because all Art must imitate the Na-

Nature of the Horse, which to content and please, is the end of the whole Art: But where contrary Natures are, there of necessity must be contrary workings, and then must needs ensue contrary effects; for every Creature worketh according to its Nature. For amendment whereof, the ignorant and pretended Rider proceedeth to violence, which the Nature of the Horse abhorreth, as a perturbation; for then his Riding becometh grievous and painful, so that he knoweth not what to do, no more than an outwardly Scholar, by whipping to say his Lesson delightfully; and were it granted, that the Horse were of a good disposition to yield all obedience to the most skilful Rider, yet shall he never attain to any perfection of Action, because Nature hath not shaped nor given him aptness fit for such a purpose, no more than a natural Fool by Education can attain unto true Wisdom. And yet few Riders neither have, nor do truly judge hereof; for that nothing is more manifest in all their Writings and Actions, than provision and means to make perfect that which is most imperfect by Nature, as though they had never learned that Art, can never overcome the necessity of Nature: Wherefore I desire all such as wish and desire to be good Riders, first to examine their own natural dispositions. Secondly, to learn to know the true and perfect shape of Horses. Thirdly, the natural Causes of their goodness and Badness. Fourthly, to be taught by an understanding Master, and not to begin without his direction. Fifthly, to practise, and alwayes to examine the reason of his Practice, then shall he see what a Hand-maid all Art is to Nature; then shall he discern in the beholding of the Actions of the perfect shaped

shaped Horſe to be eaſie, quick, and ready according to his perfection of Nature, as true qualities bred and brought forth by Nature, not by correction, but with all mildneſs and gentleneſs, voluntarily performed, the which all true and natural Riders will and ought altogether to cheriſh, ſeeing all Horſes do in that bountiful form, that he himſelf doth expreſs, when he deſires to appear moſt comely and juſt in his Pace, juſt in his Trot, juſt in his Gallop, juſt in his Carriere, juſt in his Head, juſt when he ſtandeth ſtill, juſt in union with the will of the Rider, his Head and Neck will be ſo juſtly and rightly placed, of ſuch ſtaidneſs, and his Mouth of ſuch a ſweet and perfect compoſure, as it ſeems as if Nature ſtrove to ſet forth her own glory: All which ſome call Natural, and not ſo much Accidental in a perfect and a true ſhaped Horſe.

It remaineth now to diſcourſe of thoſe things which moſt principally are required by the Art, for the true performance of ſuch Actions as Art requireth, either for helps, corrections, or cheriſhings for reducing the Horſe to perfect Action, fit for the moſt gentle uſe of man.

For he that knoweth how to correct and cheriſh a Horſe in his due time, is, and ſo ought to be accounted, the moſt grounded in this Art, the which cannot in a ſmall time either be attained or performed; and therefore for the true attaining thereof I wiſh that none undertake the ſame, as I ſaid before, but by the direction of an expert Maſter, leſt it be ſaid to him, as *Timotheus* the beſt Player on the Flute, of his time; who when that he took a Scholar, uſed to demand of him, Whether he had made an entrance into that Play, which if he had, he took a

greater reward by half, than he did of them that knew nothing, saying, That his pains were greater to take from him what was unskilfully taught him, than in teaching that which was good to such as understood nothing at all thereof. The things that are principally to be used for helps, are, as hath been said, corrections and cherishings, which may be contained in these three heads, *viz.* the Voice, the Hand, and the Leg; because the Voice by words of Art helpeth, and with mild, meek, and gentle words cherisheth, but by loud and taunting terrifieth and correcteth. The hand (being the Instrument of Instruments) upon the true use whereof the ground of the Art resteth, by the temperate and sweet stay thereof, it helpeth: By clawing, or gentle putting to the Horse, it cherisheth, and by correcting or striking, frighteth. Again, the Hand by the stroke, jerk or sound of a Rod, or Wand, is sometimes very useful, it often helpeth by practising mildly and gently with it, clawing and scratching the Horse, it encourageth and cherisheth him; but by striking him too hard, correcteth to his displeasure. Again, the hand with a Bridle, in slacking it, easeth and cherisheth him, and by drawing it hard, oppresseth and correcteth him, by the guiding thereof it governeth a Horse, as a Stern doth a Ship, which in all motions and actions answereth to that motion which the hand moveth. The Leg, when it gently provoketh with the Calf, helpeth; the Spur also by gentle means helpeth, and when there is a just occasion by hard strokes correcteth; so as to bring a Horse to true obedience and perfection of action, he is to be corrected, helped, and cherished; he is to be directed or helped, to the end he should not err, therein is
great

great knowledge required: He is chearfully to be cherished for his well doing; to accomplish which, knowledge, Reason and Experience are required whereby appeareth how every good Rider ought to be qualified; of which, namely, the Voice, the Hand, and the Leg. Before I come to speak of Action, wherein the true understanding hereof is most proper, I do purpose to give a little further Instruction, and first of the Voice. When you mind to help your Horse therewith, it must be with a most mild and chearful one, as to say, Hey, Hey, Hola, Hola, so Boy so, Hup, Hup, enough, enough, no more; and many such like: But a correction is clean contrary, which is with a terrible thundring Voice, as Villain, Traitor, and many such like, whereas in cherishing, the most mild and sweet Voice is used, as my good Boy, so my good Boy, with an inclination of bending your body to him, and such like encouragements; so as also the sound of the Voice is to be used, as well as a Voice pronounced, by giving a Chirk with the Tongue, which may be called Clacking, in pronouncing whereof, the tip of the Tongue striketh the roof of the mouth, as it doth in making the supposed sound drawing near the Greek word *Clogmus*, and so also there is another sound of the Voice to be used, as Hey, Hey. The next is the Hand, which, as I said, is the Instrument of Instruments, in the true use and government whereof, is the ground of the whole Art; and as for the Bridle and the Rod, they are but dead and senseless Instruments, without all use, when they are not appointed for the right use, of the temperate and steady hand bearing up a firm moderate stay, nei-

ther too much slacking, nor too much drawing in; every good Horse causeth a true and a just rein, a just bearing, a just staidness, with a light and sweet mouth in all actions; so as whatsoever the Horse doth, is both easie, ready, and perfect, and being done with delight, must of necessity be best done, because it best pleaseth both Man and Horse, neither of them being moved to any perturbation, grief, or pain: And as for the Rod and Wand, being Instruments only for the hand, how and when they are to be handled, offered, used, or not used. And for the Bridle which the Italians properly call *Il Manico del Timone*, the handle of the Stern: We shall for the present pass them by.

The third thing is the Leg, wherein the use of the Calves of the Legs, the Heels, the Stirrup, and the Spur are to be handled; I shall, to avoid repetition and all manner of tediousness, refer them also to their proper place. And I shall for the present divide this our immediate Concernment into certain prescript, general Grounds or Rules, to follow which, the Rider shall find of daily use in teaching the whole Art to his Scholars and Horse.

First, when the expert Rider beginneth to teach a young Scholar, let him follow the Order of the discreet School-master, that teacheth Children to write, who inviteth them with his gentle usage to the Pen, Paper, and Ink, and in a most mild and civil manner, teacheth them how to use their arms and hands, and how to hold their Pens; and then how to make the first Letter, the which when the Scholars attempt, though it be very bad; yet in respect of the infancy of their knowledge, and willing minds to do better, they are not only commend-
ed,

ed, but rewarded for doing so ; the Scholars being thus encouraged, desire to go on to be taught to make many Letters, and then after in a gentle and slow manner, he teacheth them perfectly, how to joyn their Letters. Even so should your Scholars be taught in Riding, and young Horses in their beginning to be taught, whereby all their Actions might bring delight and admiration to their Beholders. For mild teaching, slow, teaching not too much ; (for a Horse may be wearied with too long teaching at one time) but giving him often breath, high keeping in courage, often rewarding, cherishing, great familiarity, no change of the Rider till he be perfect, no change of Bit, no rough Bit, no cutting or galling of his Nose or mouth, but gently feeding, no beating, or whipping, no violence, no passion, but with all manner of Natures delight, make the Horses actions more than wonderful, because Nature hath a natural love to it self, and an innate hatred to all things that are Enemies to the same, which is plainly testified by that natural Sympathy and Antipathy, which may be observed in all Creatures, as the Lamb which never had Experience of the Wolves cruelty ; yet at the first sight of him, doth tremble and flie for fear.

C H A P. II.

Of Correction.

SEcondly, that the Rider never doth correct his Horſe, but when gentle means and cheriſhing will not prevail; for no doubt but that he will willingly yield by gentle means, if it be ſenſible to him, what, how, and when to do: But that Horſe that will not be moved by gentle means, let the Rider aſſure himſelf he is of a bad Nature: But if any thing ſhall happen wherein of neceſſity Correction is to be uſed, then let *Solomons* direction be followed, who, as he was the wiſeſt man that ever was, or ſhall be, ſo did he keep more Horſes than any King, that Hiſtory mentioneth, who ſaith, That an untamed Horſe becometh fierce: But if he offend, in the inſtant time that he erreth, correct him; wherein how many do offend, all mens Eyes are witneſſes, beholding the common Horſe-breakers and ignorant Riders to miniſter horrible and moſt violent Corrections, when the Beholder cannot ſo much as ſee a cauſe, nor himſelf expreſs a reaſon, but errorr evermore taketh that for truth which is falſe: So as it plainly appeareth, that when a Horſe hath been taught, and yet notwithstanding erreth in his Diſcipline, that he hath been truly taught, *Solomon* would have him in that inſtant time puniſhed for that errorr, but not to correct him for ignorance, which renders the Rider either to be mad, or as ignorant as a Horſe.

C H A P. I I I.

That Teaching is not fit for such Horses as Nature hath not framed fit to be Taught.

THirdly, that all Riders lose no time in Teaching of good Horses; but as for those Club-headed, Distorted, Ugly-countenanced, Fleshie, Gourdy-limbed, Short, Thick-necked, Low-foreparted, Narrow, Shallow-breasted, and Evil shaped Jades and Roiles, turn them either to the Carts, Car-men, or *Paris-Garden-stable*: For in every particular Nature (that is the temperature of the Elements in every particular body, without all contradiction) causeth and maintaineth the particular actions of the body wherein it is: And that such shaped Horses were never compounded or framed of a true Temperature of the Elements, and therefore impossible to be reduced to the perfection of action, otherwise than by abuse and great force, Nature abhorreth. And that is but for a small time, such Carrions as these made use of also, do shadow the Glory of the Kingdom, disparage the Judgment thereof, discourage many Noble and Heroick Gentlemen, either to become Breeders, Riders, or Maintainers of Horses; and lastly, cast mists over the Perfections of our English Riders.

C H A P. IV.

Of the English Bridle, Saddle, and bringing of the Horse to the block, the Mounting and Seat of the Rider, and of the Execution of the Action, of Teaching of the Art.

WHen the Horse is made Gentle, Familiar, and fit for the Rider to Teach, put on a Head-stall, or a Canet-sane over his Nose, with a pair of strong Reins, but so loose and easie for his Nose, as may neither hurt nor abate of his Courage, or his quick and fresh feeling; and in a most gentle manner, set a saddle upon him, with an upright short Pommel, so as that the true use of the hand may not be hindred or injured, the Bolsters whereof should be broad in the top to inclose the Thigh, and yet to bear so slope, that the Knee be not pinched, nor the Thigh kept from the true resting place, the Seat whereof should be of a reasonable length and largeness, the Bolsters behind bearing forward to inclose and support the Thigh to the former Bolsters; the Strapper thereof broad and very strong, with broad Girths, and with very strong and broad Buckles cross-girded, so as that the Saddle may rest firm on his Back, whereby the Seat will be easie, sure, and certain, without motion, leaving the near Stirrup-Leather almost half a hole longer, than the right Stirrup; and although that the Horse be gentle, yet because he hath a new Master and Rider not known unto him, being neither assured of himself,

self, nor of that his Rider would have him do, so as that it may be truly said, that he is not himself, but that he is troubled in mind : Therefore to keep him from fear and perturbation , I would have a quiet and staid Horse also saddled to be rid before him, and then bring them both to the Block ; but the old Horse first, and then the Colt, at which time let the Rider use all the mild and gentle words to the young Horse, making the Reins of the Bridle even and just, holding them in his left hand, not stiff, nor altogether remiss or loose ; and as soon as he is mounted on his Back, let him sit quietly there a while, lest any sudden motion should breed any perturbation in the Horse, and until the Rider have settled himself in his Saddle, his Nose directly answering the Horses fore-top, betwixt his Ears, his Legs hanging straight down, neither thrusting down the Toe, nor lifting up the Heel, but with his Foot with such evenness in the Stirrup, as if he stood upon the Ground, the Stirrup-leathers rather short than long, winding his Toes somewhat nearer to the Horses side, than the Heel, holding the Reins even and just with his Crest, even with the point of the Withers, a little above the Main, with his Thighs and Knees close to the Saddle, and his Feet resting in the Stirrup in due place, not too far thrust into the Stirrup, with an upright and straight body, his Ridge-bone answering the Ridge-bone of the Horse, so as the Horse and Rider may ever seem to be of one body in all motions ; during which time let the Rider claw the Horse with his hand, to remove from him all fear, or hard conceit of, his Riding : That done, let him go forward two paces fair and softly, and stay again, making much of him,
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and so pace softly and quietly to the place where the Rider intendeth to tread out a Ring; all which must be done by the Rider boldly, and without fear, and as he must be thus used in going forward, so must he be used in Treading and Pacing out of the Ring, in some new-plowed Ground, that is most deep of Mould, where first let the old Horse enter betwixt two Furrows, so far as the Rider may have space enough, and Mould enough, and follow with the young Horse close to him, which will cause him the more willingly to go, because he is directed and guided by the old Horse, by which means he shall not be any way discouraged: Then let the old Horse (the young Horse following) enter on the right hand, overthwart the Furrows, and tread out twice together a round Ring, containing in circuit about 30 paces, and being come about the second time where he began, let him tread out the like Ring on the left hand, and after he hath gone twice about, let him begin again on the left hand, and so continue till he have gone four times together about the left Ring, and the right six times; that done, let him go fair and softly out of the Furrow where he began, about 30 or 40 paces, and there stand still, keeping his head and his body right in the path, remembring alwaies to have some go by, to signifie his true performance, and to help if need be; and then let him go very gently back from the place he came, and there let the Rider alight, and make much of him, by Coying him, and giving him a little Grass, Hay, or Bread in his mouth, to procure and win Love: And thus let him be used two days with a Horse before him, and after him. Let him then lead and begin himself, to tread

tread and pace the Ring in this gentle manner, for the space of ten days, keeping a temperate, staid, and fine hand upon the Reins, with a sweet feeling stay, carrying his Fore-head as Rams do when they go to fight, whereby he shall not only Rein well, but bear his Head staid and light ; and when that he knoweth what to do, and that for the same he is always cherished, he will strive to do it faster: Through the Riders continual keeping of his hand stiddy, the Horse will do it with a wonderful pride and delight, by giving him liberty ; but a too hasty treating of the Horse, will work the clean contrary.

In the pacing of the Ring, the Rider must not carry any over-hard hand, to dull the sense ; but so temperately, that the feeling may be always fresh ; otherwise by the violent, by much galling his Nose, whereof he would willingly have ease ; to avoid the same, he will set his Head and his Neck awry, the true use whereof is, that standing in the Furrow just and straight with his body, the Rider moves him gently to go forwards, and in the very motion, turns him on the right hand, by drawing very softly the right Rein shorter with his right hand, lower under the Pommel of the Saddle, whereunto if he yield (as no doubt but he will) especially having trod the same before, let the Rider presently make much of him, neither drawing nor slacking the Rein : At which time for his doing both for the ease of the Rider and the Horse, if need shall be, let some skilful person (but his Keeper were most fit) come on his right side to his fore-shoulder, and thrust him in by little and little, & the Rider also by the Calf of the right Leg, and the Clack of his Tongue to be a help to make him go forward, if the Horse be such a one as I have described he will do it ; but if he should not in the very

ry motion of the turn, then let the Rider draw the Rein with his hand, as before, whether it be on the right hand, or on the left : All which must (as hath been said) be done by gentle dealing, so as that the Horse may hope for rest and quietness, whereby he will be ready to do whatsoever his Rider will: But if he be a rammage Jade (as I said before) and of an evil disposition of Nature, for my own part I esteem him not of any worth, nor fit to be kept. Having spoken of Pacing of the Horse in the Ring, it followeth, that after the ten days are expired, the Horse be taught to Trot the Ring, which he must begin in a slow and gentle Trot, as he was in the first beginning of Pacing, increase his Ring-turns by two and two every day, until he make ten Turns for the left Ring, and twelve for the right, which will augment his swiftness, whereof he should be restrained until he be most perfect, and then he will do it with the greatest Grace and Pride that may be imagined, which is the true property and quality of all Art, evermore to affect and effect to perfection ; during which time of the beginning of Trotting, he must not be ridden with a Wand, nor wear any Bit, until he be most perfect in his Trot, stop, and turn well on both hands, and not by any means suffered to Gallop, until that he can also perfectly advance By taking this course he will be just in his Pace, just in his Trot, with a staid Hand and Neck, being the chief lustre and goodness that Nature and Art affordeth.

Wherefore, when you begin to Trot the Ring, be sure that at the first he be moved thereunto as gently and quietly as you can devise, and so every Action whatsoever, upon a restrained, temperate, and firm

firm hand, with a sweet stay, and with a true Rein, that is, that his Nose be just under his Fore-head, neither too much out, nor too much in, which is the just placing and setting of his Head, which will make him to have a pleasant Mouth, when he cometh to wear the Bit, in which consisteth the chief point of Horsemanship, because he is so to be maintained in all his Actions, the which is most easie to be done, and to be continued, if the Horse be of perfect shape and spirit ; but if he should make resistance, for that he is either rammage or evil broken, then Trot him swiftly with quickness of Voice, Rod, and Spur ; for the time of his Trotting, is the fittest time to make him forget his toys, and to attend his way ; and if all this will not help, then spare not to Gallop him ; and if this fails, then be sure he will be a Jade from the beginning to the end ; for a Horse of a good temper and perfect shape, can never be of so bad a Nature and Quality.

I shall now next discourse, how to make the Rider perfect in stop, after he hath ended the number of his Ring-turns, which is to trot his Horse right out in the middle Furrow betwixt the Rings, until that he come to the place of stop, and there to make a pretty stay, keeping his body right in the path, wherein if his whole body or any part stand overthwart, seek not at first, thorough your too much passion, to correct him for the same ; but let a Footman direct him to stand right in the path, as we said before, by thrusting in that part that standeth out of order, or that he may cause the Horse to go further in the same path, and stop him, holding that Rein straighter on that side, whereon he most forceth his head, then afterwards the other, which will

will inforce him to keep right ; which when he yieldeth, ever cherish him, and after it will be good to trot and stop him on a ground that is a little steepy, which something falleth, and immediately riseth: But when he is perfect, then he may do it on a ground that is very steep : But to teach him to go back, the Rider must (as I have said) keep a firm staid hand upon him with some liberty, and then gently striking him on the Neck with his Rod, in that instant of time say, Back, Back: But if he refuse, let a Foot-man with his Rod gently strike him on the Knees, and so by the gentle pulling in of his hand, and fair means, win him, and when he yieldeth, cherish him.

Having shewed how to ride a Horse without a Wand, Bit, or Spur, I will now shew the Rider how to manage all three, together with the true use of the hand upon the Bit, one of the chief and only principal points of Horse-manship. First therefore, when he rides with a Wand, let him take it very warily, that the Horse be not frightened therewith, and to ascertain the Horse thereof, presently after he hath received it, toy, and scratch him about the neck with the end thereof, and for the carrying of it, it must be carried in the right hand, with the point upright, and when that he must use it, let the point fall close unto him, as occasion shall require; but in his management of it, let him lay his hand upon his right Thigh, and his hand cross the Horses Neck, and when he is almost ready to turn on the left hand, let him lift up his hand and Rod, and hold the point right forth on the right side against his Eye, and as he changeth turns, so let him change his Rod on the one side and on the other : But if his Horse
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will not turn on the side he would have him, let him strike him on the contrary side ; and when he is any way disordered, let him carry his Wand on the contrary side ; and when he would have him carry his fore-part right, strike him gently on the shoulder or fore-legs, and when he would have him lighten behind, strike him on the Rump and Haunches : And thus much for the use of the Wand, as occasion shall serve.

Now for the use of the Bit, which is an Instrument only guided and directed by the hand, and because the ground of the Art of Riding dependeth only upon the right use and true government of the hand, being guided by reason and discourse, so as the Horse in all motions and actions is, and ought to answer to that motion.

First, therefore, let the Bit that he first bit his Horse withal, be gentle and pleasant ; yet so that the gentleness cause him not to despise the Rider, nor the hardness drive him to despair ; for you must understand, that knowledge always presupposeth reason, and reason sense, and sense reason : All which consist in a true Mediocrity, and therefore amongst the most learned Precepts that were written in the Temple of *Apollo*, in Greek, this was in the second place, Nothing too much.

For if he press him with the Bridle, if he carry his Head well, yet must he presently ease his Bridle-hand, and make much of him, because he sheweth himself obedient to him ; and whensoever he doth any thing well, and with delight, the Rider must be very careful not to vex him, but ever so to win him, that he may be willing to please him. So likewise when he bears a firm hand with a stay, that

that thereby the Horſe doth bring in his Head, and yield to his hand ; yet he muſt ſhorten the Reins of his Bridle, till his Head be ſetled in its due place, that is, as hath been ſaid, neither to carry his Head too much out, nor too much in, and ſtill to maintain him in the form of his doing ; yet that it exceed not Mediocrity or Temperature, but remain light on the Head with a ſweet Mouth.

Thus having ſhewed the Rider, that it muſt be done by keeping this order, I proceed : Let him ſtay his Horſe temperately with an even hand, as his reſiſtance ſhall require, without giving any other liberty, than with his Rod to ſtrike him gently upon the bowing of his Neck, provoking him mildly with the Spur on that ſide on which he moſt wrieth his Buttock ; to the end that he may go juſt, until he draw back one of his Fore-feet, which if he do, make much of him, and then ſtay a while, and do the like, drawing away the Bridle ; for the former cheriſhing will make him to underſtand, and then will he go lightly back with both the Fore-legs, when he is touched on the Neck with the Rod, ſaying with a loud Voice, Back : At which Voice, with the feeling of the Rod, and drawing of the Bridle, he will go back to the Riders deſire ; and always after when he is out of the due and true way upon the Bridle, let him do the like, that is, to go back in form aforeſaid. And although ſome diſorder be committed, let not the Rider deſpair ; for he ſhall find him eaſily won to a good Mouth, by this uſe of a temperate and a firm hand, which is the Mediocrity of ſlacking and drawing, which is properly named a ſweet Stay, which the *Italians* call *Dolce Appoggio*, making him light upon the hand, champ-
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the Bit with great pleasure, and a staid Head in due place, the true Tokens whereof are just Rains : Staid, and a light Come-head with pleasure on the Bit being properties inseparable in every perfect shaped Horses actions: But because it may seem very difficult to have a continuance of perfection in any action, although it is common upon stop, or standing still, to be in order ; yet perhaps upon motion he will leave playing upon the Bit, and bear up the Head, especially upon the main Carriere, which proceeds from a want of true knowledge, how to maintain and continue the hand just and firm with a sweet stay, so that he may take pleasure on the Bit ; and therefore how to maintain a Horse both in furious and quiet doings, is to be considered of. If then that any time he make any disorder, note it diligently, then stay him, and make him go backward, as you did before ; for in going back, he will bring himself to his right order again, then presently make much of him, and forthwith move him forwards ; so must he be used in Treading of the Ring, first gently upon the Pace, upon the Trot, and upon the Gallop, in practising whereof, he must precisely observe that he be done with a temperate, staid, and firm hand, otherwise he will gape, thrust his Tongue upon the Bit, or over the Bit, to defend himself, thrust his Head out suddenly, pluck in disdainfully, or else shaking or moving of his head one way or other, to be freed from the pressing of the intemperate hand, which is to him violence, and contrary to Nature, the which Art should evermore labour to please. The true form and practice of drawing the Bridle, is also to be learned, which is, that being Mounted in the Saddle,

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dle, let the Rains be drawn equal ; and if the Horse know not the Bit, then let the Bit be very slack, and let the Rider hold the Reins in his left hand, with the little-finger and Ring-finger between, under the Pummel of the Saddle, as near the Withers as he can scarcely perceive, the which he must not remove until he feel the Horse to stay upon the Bit, and there hold him without staying or further drawing, until he perceive whether the Head stand in the true form ; which if it be not, then let him a little yield his left hand again, and standing so a pretty while, bring his left hand to his former place again, where the Horse made his first stay upon the Bit ; then let him draw his Rains with his right hand somewhat more through the left hand, as before, but so little and gently, as scarcely to be perceived ; for so must all the motions of the hand be, and then keep it staid and firm a pretty while ; and if he yield, though very little, let him keep his hand still at one stay, neither slacking nor drawing it, whereby he will feel the ease that he hath got by yielding of it, and then presently make much of him. But if it so happen that the Rains fall slack, let him not remove his left hand, as before ; for they must not be slack until they stay again upon his right hand, whereunto whensoever he yieldeth, make much of him, continuing still in the same manner to solícite him, till his Head be in its due place : After which time, if he bear not light, let his Rider strike him gently upon his knees of his Fore-legs, to make him to go back, whereby he will bring in his Head, and then will the Bit move, and his hand find ease ; but let him be very careful at that instant, to keep his hand so firm, as that he neither slack nor draw

draw in, to the end that he may feel and retain the ease of his own motion of yielding, which willingly he will not lose, it being delightful to his Nature, but take some pleasure to stir the Bit in his Mouth, and go backward withal with it, which when the Rider finds out being won, with observation of good order, he may be brought to a more continual perfection. Thus I have shewed the Rider so much of the Art as may help him : But if the Nature of the Horse be opposite and repugnant, as in the greatest number of Horses, it is, as I have said before, to no purpose; however for a time he may seem to be taught, yet questionless it cannot be of any continuance.

1. Therefore let the Rider observe, that when he is teaching of his Horse herein, or any other Lesson, that he doth not trouble him with any other thing at that time.

2. That he do not suffer any one to ride him, until he be perfected by himself in such Lessons as he taught him, lest he should be confused by the diversity of Teachers, and their manner of Teaching.

3. That when he is brought to a just stay of head, and an assurance of the Bit, that then his Rider is to maintain him therein, to a fulness of perfection.

4. When he is out of order, then let him stay him, and make him go back, as before was mentioned.

5. When he is in order, as we have often expressed, make much of him, and not stay long, but with a firm hand, gently put him into his Pace again.

6. If he continue in good order, cherish him, guiding his body with a pleasant and gentle motion

of the Calves of your Legs, move him to do it more expeditiously, which if he be of a good Nature, he will speedily perform ; always remembering to keep a firm hand, unless he bring in his Head.

7. If his Trot continue not lightly upon your hand, stay him, and cause him to go back, which will bring him in order again, and then gently put him into his Pace, and so to his Trot, as before ; which being well done, cherish and delight him with all the sweetness that you may, so that the Rider may overcome in his love thereby, and guide him by some leading Line, and give him a little Grass or Hay out of your hand, Tickle, Scratch him, and speak to him most loving words, which will make him at his next Exercise to do all to his Riders greatest content, and within twenty days or thereabouts, he will pace and Trot in such order, as that the Rider may always afterwards Trot him most swiftly in the Ring, or in the Manage.

8. In his swift Trot, by all means keep your true seat and firm hand, so that he lose not that excellent grace and form prescribed ; but do not Gallop him, till he be just perfect in his swift Trot, and then out of that Trot, to put him to a swifter and quick Gallop in the large Rings, even to the stop : But beware that you draw not your hand hastily to you, but by a little sway of your body, back and hand together, and sway your hand there, until he retreat a step or two, and there stay him, and suffer him not to go forwards, and at that instant make very much of him, and so let your Hand and Body re-assume the same place again.

9. I dare to assure the Rider of the right use of
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what hath been said, and of the success thereof. Therefore let him follow his Practice, and continue it: Let him pace his Horse overthwart some deep Fallow, as fast as he can for half an hour, but suffer him not to Trot, keep his hand in a firm and temperate stay, as before; and if he find his Head in due place, his Carriage light and pleasant upon the Bit, he may assure himself that he hath gained the perfection of the hand, and the true use thereof for the teaching and making of his young Horse; wherein observe, that if he be of perfect shape, his Head will be in the due place, and light upon the Bit without Art.

I now intend to discourse a little of the Horse that is ready taught, and brought to perfection: With him the expert Rider hath small use of a Rod, or any other help, but to keep his true, just, and perfect seat, because his Horse, by the least token of Bridle or Spur, will do all things in such time and measure, as the Beholders will judge the Man and Horse to be but one Body, one Mind, one Will; and therefore how the Rains should be carried, placed, and used, is the only thing to be spoken of.

The Rains he must hold in his left hand, placing the little finger and the Ring-finger betwixt the two Rains, and the Thumb close upon the Rains, so as that the hand remove not from the Crest of the Horse; for by the motion of the hand, it is signified to the Horse which way you should have him turn, and slacking it on the other: The order and manner whereof hath been, and is diversly used of the best Horsemen, and therefore I leave it to every mans use, as he findeth it to be most fit: But in the running of the Tilt, where the Horse neither doth

nor can turn, the Rider must not draw the Bridle towards the Tilt, but only strain the Rein that is next the Tilt, to make him carry his head towards the same.

1. Because the true shape and goodness of the Nature of the Horse is it that Art attendeth and worketh upon ; in those Horses the Rules of Art have perfection with continuance, so as that the Horse that is of perfect shape and body, shall not indanger wind, or limb, or deformity of body.

2. Next his person shall never be in peril by rearing or running away.

3. Nor shall the Rider ever be grieved with heavy bearing upon his head, but perform all with great delight : Neither shall he need Canet sale, Musrole, Martingale, or such like, but only false Rains.

4. And lastly, this teaching will manifest the difference betwixt the true knowing and ignorant Rider, which will be perceived by the very Horses doings ; the Horse doth represent and express himself most beautiful, and thereby renders the expert Rider and the Horse to appear most nobly, with such delight to the Beholders, that they will seem to be ravished with it : All which is attained by discretion, taking of time with moderation, and temperance, which is little regarded, and of very few, who will rather chuse to ride out of order, and that with much extremity of Spur and Rod, that for want of breath they commit many strange disorders ; whereby the poor Horse is most cruelly tormented, having no other to ride him but one without discretion, a mad man. After your Horse hath

hath perfectly learned swiftly to trot, and to stop, as well to go back, then ought he to be taught rightly to advance, which is by lifting up his forefeet just and even together, like to a Goat, somewhat above the Ground, and so to let them fall even and just, twice or thrice together; The true doing whereof still causes him to make a just and perfect manage, and a ready and true turn: For the attaining whereof, trot him gently forty or fifty foot in some plain way, and give him a just stop, which he will truly perform, because he hath perfectly learned the same. Let him always keep a perfect, stiddy, and pleasant hand on the Bridle, then instantly with a mild voice, Hup, Hup, striking him at that instant with his Wand on the right shoulder, and also on both the Calves of his Legs together, but spur him not, if possibly without it he will advance, the which with a little labour and patient teaching, no doubt but he will attempt to do twice or thrice together, which if he do, then in that instant let his Rider make much of him (although he did it very meanly) then let him pause a little time, and give him breath, and trot him again in the same manner the like distance of ground, and as before, so gently use him again: But if he do not better every time he is taught, he must be still solicited, until that he do better, and then after that he can in plain ground perfectly advance, to teach him gently upon the hanging knole of a Hill, to bring him perfectly to stop, and run sliding upon his Buttocks or hinder Legs, which is very handsome, beautiful, and graceful for Manage and Turn; and therefore let him do it before he is taught any other Lesson, and then he will do it upon a soft trot, upon the swift trot

and afterwards upon a soft Gallop, and not before; but never upon a swift Gallop, until that he be perfect both in Turn and Manage. If he advance too high, and not just and even, with a good grace as he ought, then may the fault be speedily found, and easily amended by immediate correcting him with one even stroke over his Legs, the Wand again ordered and conveyed out of his sight, with a sweet staid hand on the Bridle: Few such tryals will amend and perfect what is amiss in the Horse.

And whereas some appoint many helps for Horses that are harder to turn on the one side than on the other (although I do confess their general desire is more apt to the left hand than to the right) yet to a Horse of good Nature and perfect shape, a little Art will speedily teach him to teach others; But if he be a Jade, one may as soon teach an Ass to play upon an Harp.

It now remaineth to shew, when to make the half Turn and the double, the Chembetta, the Manage, to pass a swift Carriere, the Cornet, and such like.

The next Lesson for him to learn, after he is perfect in those I have set down, as I promised, is to make a true and a just half double Turn, which should be in this manner. First, when the Rider hath gently trotted, stopped, and advanced his Horse the length of a short Carriere, let him teach him gently and mildly to make the half Turn (beginning alwaies on the right hand) that is, for the Rider to turn him with the help of his left Leg, that his head may stand that way, which before his Tayl stood, which is called a Half Turn, because he maketh his half Circle: But if in the Turn he
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set his head that way it stood at the first, that is a whole Circle, and therefore called a whole Turn: But let him first do the half Turn perfect, which must be done by helping him with his Voice, and Calf of his Leg, and not at first by any means to have him spurred, if he can otherwise be brought unto it; because a Spur is a correction, which is not to be used but at that instant time when he hath committed an error, and not when he remaineth ignorant, in what he doth; by which means undoubtedly, being a sensible Creature, he will perceive his errors and offences, whereby with little correction he will easily amend any fault. Let the Rider never go about to make him despair, but continually encourage him; for having formerly attained a perfection of a just, even, and swift Trot in the Rings (the very true ground of all other Lessons) he will easily turn on the right hand, setting his head that way that his Tayl stood; the which being perfectly attained, then let the Rider close it up with another half Turn on the same hand, with the prescribed help, setting his head and all his body in the same way it was at the first; then give him breath, and make him do as much on the left hand, with those other prescribed helps, and so change from hand to hand, leaving alwayes on the right.

1. In the doing whereof, observe whether he bring on the contrary Leg orderly.

2. That he do it after the first bound of advancing, and after the second or third bound.

3. That after he is perfect in doing the whole Turn, that the Rider make him to do it swiftly and roundly, without stop or stay of the half Turn,
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and speedily in the closing of every whole Turn, and in as narrow a compass as may be.

4. That the Rider (as hath been said) begin on the right hand, and end on the right.

5. After he is perfect as aforesaid, give him on each hand three whole Turns, whereof let the first be very fair and softly, beginning at the right hand, and ending on the right; in performing whereof, the Rider must alwaies help him with his Tongue, his Rod, and his Leg, by which continual use before he teacheth him any other Lesson (which should never be done, unless he be perfect in the Lesson he is learning, so that the Rider shall in the end, with discreet and temperate teaching, bring him to an admirable perfection, keeping time and measure, that the one be not swifter than the other; if either the last, which for the most part is as speedy and perfect.

Now to proceed to the Managing thereof, the true signification whereof is to be rightly understood by such as intend to be expert in Horsemanship; for *ignorant's terminis ignoratur & Ars*, to be ignorant of Terms is to be ignorant of the Art: I take it to be a compound word of the word *Manus* and *Agere* (the hand in this Art being Instrument of Instruments) doth guide and govern the Horse to every action, and therefore may fitly be said, *Manus agere*, or as the Italians properly call it *Manigiare*, which is as much as skilfully to handle, And therefore when the Rider shall exercise the Horse perfectly and gracefully in his pace, trot, stop, advance, double, or single turn, gallop, leap, capitolle, cornet, assault, or whatsoever the hand being the principal *Astor* or
primus

primus motor, may truly and aptly be called Managing; which cannot so rightly be done without the general knowledge of the practice of the Precepts of the whole Art.

And although many worthy Horsemen have and do only rest and reign Managing to Galloping, and to bring a Horse to and fro one self some path, by a half rest, and when the Rider manageth with a half rest, causing the Horse at the end of every managing path, after he hath stopt, to advance twice together, and at the second bound to turn and rest one bound; Doth not the Rider therein exercise the Trot, the Stop, and the advance, and the Turn which he formerly learned, and according to the same manner? or when he manageth with the whole rest, by turning him immediately upon the stop, without any carryance or rest at all, which only is most common with us in *England*; and yet the managing of the half rest is most necessary for the attaining of perfection: Doth not the Rider keep and maintain the Horse in one path, one place of stop, making him to keep his ground, and therein carry his Head, his Neck, his Legs, and his Body just, closing his Turn roundly, and in a narrow room, with the true time and measure in every action, as hath been taught? How then can Managing be properly referred to one only action, when it is the perfect acting of every Action and Lesson he hath learned? wherein when the Riders Horse is most ready and perfect, he may increase the often doing of his Lesson as he will, and make an alteration of his Turns and Exercises, to find out the truth of his obedience; and when the same are first artificially and then exactly performed

ed, then may the Rider be truly said to be a perfect Manager.

Now are to be shewed, what are the principal things that are to be observed in the true Managing of a Horse.

He is taught his manage with a soft Trot, and not with a Gallop: my reason is, because thereby he may be at the first sensible of apprehension what to do, and how to do, and that gracefully, by the bowing of his Houghs behind, by turning round with the Chambetta, which is by holding up the fore-foot on the side he should turn, whilst he brings over the contrary Leg, and setteth it not down until he have closed his Turn, so as hereby he shall carry both his fore-feet above the ground, not trailing upon the ground, which is disgraceful. When the Rider teacheth his Horse (which is after he can stop well) let him advance before, and turn readily on both hands, then with a soft Trot come to the place of stop about 20 paces in length, and make him advance twice together, and at the second bound turn him on the right hand, as hath been said, you must alwaies begin, helping him, so that by bowing of his Houghs behind, he move his forepart orderly, then immediately in a gentle manner trot him back to the place you came from, and then thereafter he hath made his stop, at the second bound of his advancing turn on the left hand, observing the like order, until the Rider have gone ten or twelve times, and at last cause him to advance twice together. And thus much for the half rest, which is to advance thrice, and at the third bound to turn; but be sure he be perfect in one Lesson before you teach him another.

In all the Riders managings, let his body still accompany his Horse with a good grace; and when he hath very perfectly learned his Manage on the soft Trot, he may manage him with a Gallop, giving him on each hand one single Turn; and a little before he is turned, let the Rider hold his Wand on the contrary side, whereby he shall know on what side to turn; and at the stop, let the Rider make him to advance, either with his Voice, Rod, or Spur, alwaies being careful to give him breath, evermore beginning with a gentle Gallop, until that he be perfect. But I wish the Rider so to use and exercise his Horse, that he may be long Master of so good and so perfect a Horse, and not to spend or spoil him in a little time, in teaching him needless toies, as some ignorant Horsemen use to do.

After the Horse is perfect in such Lessons as have been formerly taught, and is grown to full and perfect strength, then let the Rider begin with him with a short Carriere in a fair sandy way, and with a lively Voice put him forward, forcing him to run swiftly, roundly, and smoothly, with a steddly hand, and lightly to stop himself on his Buttocks; then let him turn him on the left hand, and softly pace him to the other end of the Carriere path, and there stop him, and turn him again to the right hand, and so leave off, and rest him. And as this passing Carrier or swift Gallop must not be done or taught, until the Horse be, as hath been said, most perfect in all the Lessons; so must it be done very sparingly and seldom, as once in a month at the most.

C H A P. V.*Of the Bound, Leap, Yark.*

SOME have a desire to have their Horses to bound, leap, and yark: and though I know it might be most exactly done by the best spirited Horse; but tending altogether to their destruction, and a matter rather of foolish delight than of any use, I leave it to the disposition of the Owner, wishing much rather to have dangerous exercises omitted than practised, unless that there are more plenty of Horses that are fit for the same; therefore any Reader cannot admire that he meets with so short a Chapter.

C H A P. VI.

Of the Capriole and Cornetti.

THE difference betwixt these two is, that the Capriole or Goats-leap is alwayes in going forwards, and the Cornetti still in one place, These are to be learned and taught by one order, but neither of them will be well learned, and therefore never exactly done, unless the Horse be very perfect to stop, which must be by much bending of the Elbow of the hinder Houghs, or Heels of the Horse. Now the Cornetti may in some part resemble the dancing

dancing of a Bear at a stake ; for when he danceth and pranceth up and down in one place, lifting his fore-feet even and just together, seeming to turn, if he might be suffered ; which is never well done, unless the Horse be just and steddy of head and body, bowing the Hams of his hinder Legs, as if he would sit and slide on his Buttocks. And the Capriole is in the same manner, but still going forwards, seeming as though he would yark behind by advancing his Rump, but doth not ; and as he doth it forwards, so will he do it backward and side-long.

Now the Rider need not teach his Horse either of these, until, as hath been said; he be perfectly exercised in those Lessons formerly mentioned, because these Lessons are only learned by stopping and advancing ; the which, if he have once perfectly, and have long practised, then trot him sundry dayes upon some hanging ground, and upon the Knole of the Hill on the same ground, make him to advance twice together at the end of the two paces, all the length of the Hill downwards, still remembring to cherish him when he doth well, to give him breath, that all his performances may be done with delight. And if he be helped with the word saying, Hup, and by the Riders Rod, by striking him on the fore-part of the shoulder, he will go from stop to stop, advancing both the fore-feet and hinder Loyns, with time and measure, as often as the Rider pleases, and in such a just, even, and staid manner, as will be very pleasant to the Beholders.

Now because I would not have the young Rider to begin any Lesson, but by the direction of a perfect Master, and in that course to continue ; so must the young Rider endeavour with himself to know
the

the reason of all his Practices, and therefore must be sure to be present at the Exercises of the most skillful Horsemen ; and as *Solomon* saith, let his foot tread often upon their threshold. Let him be acquainted with the most expert Practitioners, and when he is able rightly to judge and to make a true difference betwixt good and bad ; then let him practise as often as he can, and never doubt with good advice to become a perfect Horseman, so as to be able to teach whatsoever is fit for a Horse to do, and a young Gentleman to know.

C H A P. VII.

Short infallible Rules to be observed and practised by every Horseman.

1. **D**O not gallop your Horse before that he can stop well.
2. Do not run him before he can stop in his gallop.
3. Do not swiftly gallop him before that he can stop.
4. Do not make him a Runner before he be six or seven years old.
5. In all his doings, from the beginning to the end, keep his Rains true, and his head steddý ; for this Rule is the foundation of all other Rules.
6. In the morning early, when that he is empty, before he eat any thing, teach and exercise him until he be perfect ; and after, twice or thrice in a week is sufficient.
7. In all his teaching and exercise, do them moderate.

derately and temperately, and leave him always after the well doings of his Lessons, both in breath, and with a good mouth.

8. After he is perfect in his Lessons, let the Rider exercise him not alwaies in one place, neither let him confine him to a just and certain instant of time.

9. In the managing of his Horse, let him not Gallop him swiftly at the first, but with a soft Pace, and seldom with a Gallop.

10. In correcting of his Horse for an Error, let him correct him even in that instant of time when he Erred, and not otherwise; and when he had done well (as hath been often said) let him be sure to make much of him, and cherish him.

These following Rules must be observed afterwards, when he is ready in all his Lessons, and in the greatest perfection of all his strength; for before that time they do not much concern him.

1. *Distemper gather roundly.*

2. *Go on smoothly.*

3. *Bear his head steddily.*

1. *Distemper Hand and Mouth.*

2. *Diminish not his Strength.*

3. *Else it will make him Over-reach.*

In all his Teaching and Exercise, to observe,

1. *Begin softly.*

2. *To go afterwards on more speedily.*

3. *To perform courageously.*

Lastly, Let the Rider exercise and perform all his Actions and Motions with an upright Body, his Stirrups being short; let him keep his Legs and his Seat gracefully, in a comely and beautiful manner, and let him perform all he hath to do courageously, without the least perturbation of Mind.



A true and brief way of Planting and Ordering of all sorts of Orchards, either Apple, Pear, Plumb, or Cherry, according to the Experience of the Author; being never before Published.

THe principal occasion that moved me to write this small Treatise concerning Orchards, was, because very many of my Countrey-men are so most abominably Cheated and Abused, by Buying several sorts of Trees of our Nursery-men, which having Bought, are so much Deceived in their Expectation, of Raising an Orchard to some considerable Growth and Benefit in a short time, by Buying Trees of the said Nursery-men, which hath proved so prejudicial to the Nation, that thousands might have enjoyed the benefit of their Labours in Planting of Orchards, had they not been deceived in their Trees, besides the great Charge and Uncertainty of their Growing. Now I shall briefly shew you how all sorts of people are abused in Buying Apple, Pear, and Cherry-Trees (but as for all sorts of Peaches, Nestellings, Apricocks, and all sorts of such kinds of Fruit, they can bring them up far better than any other, they having both, and giving them extraordinary attendance, so it is not

not convenient to shew the way of raising of them) which is thus : A Gentle-man, or Country-man, Farmer, or any other having provided his piece of ground, by Manuring and Enriching it with good store of Soil (for I suppose no body is so Ignorant to plant without his ground be well enriched) his next thing (as hundreds before him have done) is to inquire out a good Nursery, which no question but he may find very good, but he will find it bad enough before he hath done with it, or else he will speed better then his Neighbours, or the Anthour of this hath done before him, who having provided his Catalogue of several sorts of Trees, comes to the Nursery-man, and desires to let him see such and such Trees, as are written in his Catalogue, which the Nursery-man willingly performs. The Gentle-man having viewed, marks them, and likes them exceedingly, agrees for 300, or 400, according as his piece of ground will take up ; and are, questionless, very good Trees, straight, handsome and beautiful to the Beholder ; But when he comes to take them up, they stand so excessive close, that two thirds of the Roots are spoiled, and the Trees being in extraordinary proof, that by such time they come into the Country, the Trees are so withered and bruiled, that not one in ten comes to perfection : And further, the Trees that you Buy of these Nursery-men come out of such a very rich Soil, that when they come to be planted in the Countrey-mans Orchard, pine away to nothing ; and after six years standing, have been forced to plant them afresh, to his loss of time, great charges, cost, and trouble. But still they run on, and delight to be deceived, and are of this opinion, that

those Trees, out of the Nursery, being four or five years Grafted, will turn to an Orchard far sooner than any other way of Planting. But I shall shew you the true way of Planting and Ordering your Orchards, whether Pear, Plum, Cherry, or Apple-Orchards, with little or no Charge, and yet shall be an Orchard much sooner and better, and not come to the twentieth part, which will accrue by Buying the Trees out of the Nursery, as the Author hath proved by Experience.

In the first place you must seek out, if you can possible with convenience, such a piece of Ground that leans towards the South, or being a Hill rising towards the South, that the Sun might cast his beams to the Root of every tree through the whole Orchard, which if it be upon an exact level it cannot. Let the Ground be good by Nature, if you can; if not you must enrich it by Soiling it, which will be no loss, considering the several Crops it will bear after it is Planted. Now having found out a place fitting for the purpose, cast up a high ditch, and well quick-set it, that so it may grow up with your Trees, to defend them as they grow up, if not quick-setted before. Now having found out your Ground and well Fenced it, you must consider what kind of ground it is, whether black mould, Clay, Gravel, Sandy or Mamsie ground: According to the Nature of the ground, you must get such Fruits as may prosper therein according to the several Soils; which five sorts many times happen in an Acre of Ground. I shall begin with the Clay-ground, all sorts of Winter-Apples do abundantly delight in a Clay-ground, being very well Soiled and made Rich: And I have observed, that your Winter-Apples,

Apples, as Pepins, Pearmains, Gilliflowers, Cunnings, and Harvey-Apples, which if you have them of the best bearing sort, growing upon a Clay-ground well Chalked, have been larger, firmer, and have endured two or three Months longer than that same sort of Apples growing upon a Gravel or Sandy Ground. Your next Ground is your Mamfic or Chalky Ground, which brings forth a very lovely sweet Apple, but not so big as the other, yet far sweeter, and will keep full as long, being fit for all sorts of Winter-Apples, and Summer-Pears, and Winter-Pears. Your next Ground is your Sandy Ground, which is only fitting for Summer-Fruit, and Cherries, which to make them thrive, you must well Chalk and Dung, at least a yard round from the bodies of the Trees, and a foot deeper then the Tree stands. Those Apples that love such a kind of Ground, are your Lerdings, French Pepin, Higthnig, Robbers, and all other Summer-Apples and Pears, and your Duke-Cherries, and several others which will not last beyond *Christmas*, yet are true Bearers and excellent. Your next is your Gravelly Ground, which will bear excellent Fruit, being well ordered, until the Trees have taken good Root. You must dig the Ground above a yard round from the body of the Tree, and dung it very well, that so the Tree may gain good strength, and bigness of Root before it come to touch the Gravel, that so meeting with the Gravel, it may not stand at a stay, when it comes to Root in the Gravel, and then there is no doubt, but it will answer your expectation. Your next sort is your black Mould, which is the best, and will bear all sorts of Apples, Pears, Plums, and Cherries, with little-

lettles help; I do not mean your black sort of heathy Mould, which hath neither heart nor goodnes, but to be cut up in Summer, and well dryed, will make good fires in Winter. Now having found out your piece of ground, and ordered according to directions, measure your ground, and so contrive to set the Row of Trees full South, at what distance you think most convenient, according as you do intend the Trees shall be suffered to grow in bigness, after your first row is planted, which must be set at such a distance, that you may plant one between every four Trees, which will make a fifth. Now having made you understand the Charge and Deceit of your Nursery-Trees, how they pine away coming out of so warm a place, and so rich a Soil, into such a Barren place; for make your Orchard as rich as you can, it is barren ground to your Nurseries; for otherwise how could a man maintain his Wife and Children out of two or three Acres of ground, if it were not extraordinary good? Therefore when your ground is provided and made fit, imploy your Labourers or Servants to gather you so many dozen of Crab-stocks, Pear-stocks, or Cherry-stocks about 3 foot long, or thereabout, according as it best pleases the Planter to have them cut. See your Crab stock & the rest be in good-proof, & not an old decaied stock but green, and as clear without knots as you can; let them not exceed in bigness above three Inches about. Now having considered your piece of ground, what sort of Land it is, set it according to directions: Having so done, bush up every Tree, and lay some muckle Dung to every one, about half a yard round, do not cover your Trees too deep in Mould,

three

three Inches above the Root is enough ; for if you cover them too deep, a good shower of Rain will not reach the Root. This muckle dung keeps the Roots moist and warm, and kills ail manner of Weeds that would grow about the body of the tree. After they have stood one year, open the Bushes, and prune all the shoots off that stand a foot below the top, leave not above three or four at most, and then you may put in Sheep, Calves, or Beasts : But if it be well manured, you may plant Garden-Beans or Pease, according as you find the ground inclined. If your Orchard lie sloping, as is best, then make a Trench to lead to every Tree; you need not have many great Trenches, but two or three, and the rest small, and so you may water your whole Orchard for the first year or two without any trouble. When the Trenches are made, you ought to let your Crab-stock Pear or Cherry to stand three years at the least before you Graft, and two before you bud ; for you will find they will bring forward your Graff more in one year than in two. You may Graff according as you see the Stock to prosper : Be sure to have your Graffs of the best sort of Fruit-Trees, and of good Bearers ; for some sorts bear fair Apples, but very few.

When your trees are grafted according to your mind, of all sorts of choice Fruits, then at the fall of the Leave view all your trees, and stop up the Cleft where the Graft was, put in some Pitch to keep the Rain out, and then it will be closed soon after, and the tree grow the firmer. When your Graffs are two years shoot at farthest, prune them all, and not suffer any to grow cross one another, especially in the middle of the tree. If you find
some

some to shoot up strait upright, hang a little stone at the end of the Boughs, but one Spring, and you will make them grow how you please. Those that grow straight upright are seldom good Bearers, if they be suffered to grow; therefore you may remedy it at the first: But when they are grown too old, they will not be half so pliable. When they begin to bear, do not suffer them to bear above three or four Apples or Pears, but pull them off; for if you suffer them to Bear too much at first, it will put a stop to the Trees growth. This I think is Direction enough for any reasonable man to order his Affairs.

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How to take all manner of Birds, Small and Great with Birdlime.

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VVith directions for Breeding and Ordering all sorts of Singing-Birds; VVith Remedies for their several Maladies, nor before publickly made known.

W. A. W.

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NEW ADDITIONS

TO THE

Art of Husbandry.

*How to enrich and make Barren, Mossy, Spi-
ry Meadows become Rich, and bear Knot-
grass, that so one Acre shall be worth three.*

WHen you intend to undertake this profitable Labour and Improvement ; consider the Meadow how it lies, low or high upon a level or descending, and whether any River or Ditch lie convenient to water it or not ; and if it be by a River, if you can convey the Water out again, having once turned it over the Meadow, then be mindful of the burden it bears, whether Spiry, or Rushy, or Clean, being only over-topped with abundance of Moss ; if the Meadow lie descending, you have a great deal the advantage of a flat Meadow, by reason the Water having over-flowed the Meadow some certain time, leaves a great soyl after a sudden Rain,

and upon the fall of the Water sinks from the Meadow, and so the Meadow becomes dry with little or no trouble, and so the Water not lying long upon the Meadow (without it runs) makes the Meadow become very fruitful; which if it lay some certain time without draining, would so chill the Ground, that it would not be one farthing advantage for the watering. Now the flat Meadow that lies lower than the River must be ordered thus; You must make one large Drain through the middle of the Meadow, and several leading Drains to it, then the River lying higher, the Meadow will overflow with little trouble: But then the chief Work and Labour will be how to drain this Meadow dry, that so the water may not lie sugging upon the Ground; it not only makes the Ground breed Mossy and Spiry Grass, but also it will prove so rotten, that it will not bear a Cart to carry off its Burden, therefore order it thus: Having made your Trenches, and a large one in the lowest part of the Meadow, if any be, then having a large Trench made to carry about a foot water, if you can make it out of a whole piece of wood or Timber, for it is much better than Planks, and will last far longer; when you have hewed your piece of Timber, made it with what Current you can, then clap a good Plank together at top with Pitch and Tow, then nail him while it is warm, and it will lie many years before it decay; having thus fitted your Current to convey the water from your flat Meadow, lay him cross that River two foot lower than the bottom of the Meadow, and then the water will drain under the River into the next Ground, where you must make a large Drain or small Ditch to convey it further,

ther, where you may have more conveniency to dispose of your water ; these low Meadows which are commonly the worst by reason the water lies on till the heat of the Sun dries it of, which if the water could be conveyed off quickly, would be extraordinary rich, which I never could see a better way in all my Travels than this, to perform with speed and cheapness ; they throw out the water of flat Meadows in *Poland* and *Sprussia* over the Banks with certain Wind-mills, which is a great deal of trouble and charge. Having now finished this work, to lay your Meadow dry when your pleasure is, without it be extraordinary Rainy weather, the next thing is to destroy your Moss, Rushes and Spiery Grass, which most Meadows that lie low are subject to : Towards the latter end of *February* scour all your Drains both great and small, and lay it as dry as possibly may be, (mending the Banks of the River, if any be wanting against *March*, which very seldom proves otherwise than a very dry windy month ; when you have layed it dry for some certain time, and you shall then begin to perceive the Moss and Rowel to grow Ruffet and Dry, then observing your time to be dry and windy, carry down a bundle of Straw or Fern, strew it upon one side, that so having set it on fire the wind may drive it quite through the Meadow ; and where you perceive the Moss any thing damp or wet, strew some Straw or Fern upon it, and set it on Fire, and you will find in a short time your Meadows to be burnt as smooth as a Bowling-Green. Having thus devoured by fire your Moss and coarse Grass, then with a Harrow, harrow your Meadow over once or twice, then take some Hay-Seeds and sow up and down

the Meadow, then with the Mold that comes out of the cleansing of the Ditches, spread all over the Meadow, that so the Hay-Seeds may be covered; and when you find the Hay-Seeds sprung up and settled, if the weather be very dry, you may turn the Water over for a night, and turn it out again, and be sure you leave no standing Water, for that will presently kill the young Grass. Observing these Rules, the next year you will find that Improvement, that one Acre will be worth two, and a double burthen with much better Grass; for the Moss being burnt away with the heat of the fire, which will so purifie the Mold, and also Hay-Seeds being sown, will spring up with the tender Grass, which before the Moss would never suffer to spring up: This truly managed, hath proved beyond what several have expected.

How to destroy Moles, being the quickest and best way at present discovered.

IN the first place you must have a Paddle, which must be put upon a Stick five or six foot long; I need not describe which way to make a Paddle, for there be but few which do not know how to give directions to have them made according to their minds, for there be several fashions, but they tend all to one thing, which is the discovery of the Moles haunts; Taking your Paddle, go out in a morning and walk round your Grounds, and see what Haunts be towards the Ditches and Banks, and when you have discovered the Trenches with your Paddle, tread them down, but not too hard; then look into the middle of your Grounds, and view if

no Hills be new raised ; which when you find, and the principal Trench leading to it ; having digged with your Paddle the Earth into the Trench, tread it down with your foot indifferent hard, and so go over all your Ground after the same manner, looking very well the Ditches and Banksides, for if it be a small Ground, though he have many Hills in the middle, yet it is ten to one but he hath a main Trench leading to the Bank or Hedg : Having thus prepared your Grounds, get Weathy or any other Wood, as Alder, boared the bigness of a Mole, and the length of a Mole, (they are bought for eighteen pence a dozen ready made) ; but being a pleasure to make them in the Winter nights, I shall endeavour to give you the plainest directions I can ; Having some Alder or Weathy about the bigness of the small of ones Leg, saw them into pieces about five inches long, then bore them through with an Auger, one bigger than another, till you think he may be the bigness of a Mole, then saw him half through, leaving an inch and half at each end, so the piece that comes out will be two inches, you may cleave it off with a Chissel ; with your Piercer bore a hole just in the middle and at each edd. When your Traps are finished, hang them up in the Chimney corner that so they may grow dry and tough ; you must at each end at the inside of the Trap, about half an inch from the end, make a round Ring about half a quarter of an inch deep, that the Hair may lie in the Hollow at each end, that so the Mole coming in may not slide or drive the Hair before him : Then go into some young Cops, and cut twenty or thirty Taper-Hasse or Dog-wood-benders, such as are used to be set in Springes for Woodcocks or Snipes, then

twist fifty or sixty Horse-hairs together, about half a yard long, then tie a strong piece of packthread to both the links of Hair, that so the Benders may strike both at one time ; in the Holes at each end of the Trap that was made with the piercer, you must put in each link of Hair, and fit them to the Circle that was made hollow at each end, that so the mole passing through the Hair may not put it out of order. VWhen the Hair is exactly in, fill up the hollow Circle with a little Earth or Clay, that so the mole may not draw the Hair out with his Claws as he passes by.

The Hole that is in the middle of the Trap, serves to keep the Benders streight ; you must put in one end of the packthread that is fastned to the Bender ; you must leave an inch of packthread to go through the Hole, and you must fasten it with a forked stick, about two inches long, the fork an inch long, and the other streight part an inch more ; the fork must stand within the side of the Trap, exactly perpendicular when it is set ; It is the Nature of a mole to turn any thing out of the way with his Nose and feet that lies in his Trench ; so as soon as ever the Mole finds a stop, he works out the Stake with his Nose and Feet ; and before ever he is able to retreat backwards, the Benders strike and very seldom fails to hang him by the middle, and never by the Neck, (as some have written) ; You must be sure to make the Trap fast into the Ground, otherwise the Bender will be subject to put the Trap out ; you may fasten it with Stones put at each side of the Trap, or small Turfs, or forked Sticks ; cover it very close that no light may come to it to make the Mole fearful. After you have thus planted a dozen
or

or more, according as your Grounds are infested, once a day you may look over them, and see what execution is done ; they will stand four or five days without altering if the Benders be good. It happens now and then, through the rottenness of the Hair-grins, that a Mole when he hath been hanged, with much struggling breaks the Hair-grin ; and then he grows so cunning that he will hardly ever come through again, but continually heave up the Trap out of the Ground : I have seen set in a Garden three Traps, in his Trench, one within a yard of another, and he hath heaved them all out of the ground ; Therefore I would advise you to have a Spike Trap or two, that so when a Mole hath been bauked with one of these Box Traps, the Spiked one will not fail to have him ; these Spike Traps are so generally known and made, that there needs no description : only by the way, have six Spikes to a Trap, and let them stand triangular at each end, and you will not fail of him ; let your Spikes be round and not square, and they will go into the Ground easier and quicker than your square.

Another way of taking Moles in March time.

After you have taken a Doe-Mole, which you cannot fail once in two or three days, then get a good handsom earthen pot about twenty inches deep, and having made a hole in the middle of a main Trench, plant the pot that the top may be just even with the bottom of the Trench, then fill it half full of mold, and put some great Worms in, then put in the Doe-Mole, (if you should not put in Earth and VVorms, the Mole would work her

her self to death in twelve hours, as I have often tryed) but first rub her about the top of the Pot, and let her run of each side of the Trench, then force her into the Pot; those that know the nature of your Buck-Moles, that at *March* they will run a quarter of a mile after a Doe, and you will find in a short time, that not one Buck-Mole will be left in the Ground where the Pots are set; you must cover the Pot very close that no light comes in, for if any light appears, it will so startle the Mole that he will be very cautious to venture; the Doe-Mole will live all the month of *March* if you now and then bestow a few Worms upon her; every time you give her Worms, you may search the Pot to see what company she hath got: This is an approved Receipt.

An approved way to make any Tulip of what Colour you please, never before now Printed.

THere must be several things observed before you undertake this Work.

1. Consider the Nature of your Tulips.
2. The time when they blow, some blow early, some late, to joyn them is to no purpose.
3. To have them exact of a bigness.
4. Not one forwarder than another.
5. It must be done at a warm time, or in a close Room where little Air comes.
6. The Moon must be increasing.
7. with an exact hand.
8. With a great deal of speed, otherwise your labour will be lost.

But observing these Rules, and my further Directions,

tions; you will not fail of your expectation; I assure you I have seen it experimented.

Now to perform this, you must have a very sharp thin Knife, and some Cruel, Yarn, or Worsted, which must be to bind the Tulips when cut; then get some of your finest sort of Clay, and mix it well with Cow-Dung, let it be of an exact temper, neither too limber, nor too thick. Now having all your things ready, being two of you together, match out certain Roots of Tulips which are of one Nature, their Leaves coming alike, and blow at the same time and season; and as near as you can guess, of one forwardness, and one bigness. I shall only instance two sorts of Tulips, which are your Yellow Crown, or Fools-Coat and White Crown, which are of one Nature, that is, the make of the Tulip is alike, and come always together. Having now chose out certain Roots of one bigness, length and forwardness of each sort, take your Knife and cut the Tulip as exactly as can be possible just in the midst of both your Roots, and slit the very Spindle of each; then immediately clap them up together, that is, one half of the Yellow Crown, and the other half of the White Crown; do not leave them open when you have slit them, but hold them together till you have all your things ready, for if the least Wind take them, they will not joyn; then when all is ready, take you half the Yellow Crown, and give your Companion half the White Crown; then having regard to the Spindle, be sure to clap or joyn them exactly; then with your Cruel, or Yarn, or Worsted, tie the Root, very firm together; then clay them up very well all over, and lay them by for a week or ten days; then cut

cut the Clay from the bottom and top, that so the Roots may shoot out, and the Spindle also, for the Roots and the Spindle will be very faint for the first year; as soon as you have cut the Clay from the top and bottom, set them into the Ground, and cover the Earth, so that the Frost may not frieze the Earth about them; for if they be frozen all your labour is lost, they seldom come up with more than one Leaf, for the first year, for very little more than the Spindle of your Root joyns together, without the Roots match very exactly; but we never regard only the Spindle joyning, which causes the alteration of the Flower; you will find the Roots not like other of sets, for these will be long like a Date-stone; when you have taken them out of the Ground, put them into Sand, that so the wind may not come at them to shrink them.

Concerning Fish and Fish-Ponds, how to improve them.

IN the first place you must consider the scituation of your Pond, and what feed will arise by any Current of water to it; then whether it be a Breeder or not: Now if your Pond be a Breeder, then you must expect to have no large Carps, for the multitude of their young will over-stock the Pond, therefore a Store Pond is ever accounted better than a Breeder; but observing this Rule, you may make a Breeding Pond become a Store pond, when you cannot make a Store pond become a Breeding one, and you shall have a gallanter grown Fish out of your Breeding pond, than out of your Store: VVhen you sue your pond, consider how many hundred

dred of Carps it will keep ; then put in all Milters or all Spawners, so you will have in a short time, large, well-grown fat Fish, far above your expectation ; for putting all Milters, or all Spawners, there will be no encrease of Carps, but of other Fish they may abundantly multiply, which is a Fish called a Roach : Therefore I would advise all Gentlemen that have Breeding Ponds, to sue them once in two or three years for fear of Roaches, though never any were put in, which may seem a Riddle, but I shall quickly unfold it ; There be several Ponds which are haunted by your wild Ducks which usually come at Nights to feed with the Tame ones that belong to the Ponds, now these Roaches are brought by the wild Ducks, for the feeding amongst your weeds in Rivers, the Spawn of your Roaches will hang about their Feathers and Feet ; and they using to come at night to the Ponds to feed, washeth off the Spawn from their Feathers and Feet, that so in a few years (though you put not one Roach in) you may find multitudes of them, and lean starved Carps ; therefore if you have any such suspicion that your Pond is infected, immediately cause it to be sued, for the longer you tarry, the worse your Carps will prove. I shall relate a very true thing that I was an eye-witness of ; A Gentleman not far from *London*, had a good handsome large Pond of about three or four Acres of Ground, which I was present at the suing, and I never saw better grown Fish every way than he had, being betwixt two and three hundred ; I advised him to put in two or three hundred of stores of Carp about three or four years growth out of a Pond that was over-stocked, and to put sixty of those he had taken out, which
ac-

accordingly I saw done, for I did fancy to have stately Carps the next suing. Now after four years was expired, I advised him to sue his Pond to see what Monsters four years addition to their growth would produce, those sixty Carps were from Eye to Fork from fifteen inches to eighteen inches when he put them in; now having sued his Pond, he found almost the whole number of his Carps, but they were in such a lean condition that he did not know them, for they were Monsters in Nature, for their Heads were bigger than their whole Bodies, and I think almost as heavy; and all this came by his own folly, by putting in but twenty Roches, and when the Pond was sued, there were bushels of small Roches, and these Roches eat up all the sweet Feed from the Carps, for Roches are like Sheep to great Battel, which eat up and devour all the sweet Feed. The Gentleman was very much frustrated in his expectation, and the Fish-monger which came from *London* to buy a penny-worth; as soon as he perceived the Monsters, got up his Horse as one frightened with a strange Apparition, and never bid the Gentleman farewell. Now pray observe one thing by the way, That Ponds which will not breed one Carp, Roches in one year will multiply by thousands; therefore there is a care to be taken every year to view your Pond, and observe if any small Fry appears, least when you come to sue your Pond, you be deceived in your expectation.

How to make Carps grow to an extraordinary bigness and length.

WHen you find your Pond begin to grow low in Water, which is commonly about *April*, then take an Iron Rake and rake all the sides of your Pond where the Water is fallen away, then sow your Hay-Seeds and rake it well, and you shall find by the latter end of Summer there will be a very great growth of Grass; which when Winter comes, and the Pond being raised by Rain to the top, will over-flow all that Grass; and then the Carps having Water to carry themselves to the feed, will fill themselves, and in a short time become as fat as Hogs that are put up a fatting; so serve it every Summer till you sue your Pond, and you will find no River Carp to surpass them in fatness and sweetness, and then I am confident you shall have no reason to complain of your charge and trouble; I will prove that ordering your Ponds thus, that two years shall be as good as four. This is an approved way to make Carps thrive.

An approved way how to take Carps or Tench in a Muddy Pond.

I Do not write this ensuing Secret to teach Men how to Rob Gentlemens Ponds, but that Masters of their own Ponds may be able upon cases of necessity to supply themselves with Fish, without being put to so much trouble and charge as to sue their Ponds: In the first place you must provide your self with a very large good Casting-Net, well leaded,

leaded, let not the Meshes from the Crown to a full yard and a half be too small, for then if the pond be any thing of a depth, the fish will strike away before the Net comes to ground; the whole Net ought to have a very large Meash, well Leaded, and deep Tucked.

The second thing required, is to make the place clean from Stakes and Bushes, and try with your Net before you intend for the Sport: If your Net hang, then all your labour is spent in vain; therefore clean it very well with a Rake before you cast your Net, once or twice, that there may be no obstruction: Then proceed as to the baiting of them, for you must not imagine that Carps or Tench will come to that place more than another, except you do use to feed them; which order thus: Take a quarter of a peck of Wheat, baking it well in an Oven, putting in two quarts of VVater at least; when it is well baked take two or three quarts of Blood, and mix this VVheat and Blood together, then put in as much Bran as will make it into a pait; then to make it hold together, put some Clay to it, and so mold it well together with a quart of your Lob-worms chopped in pieces and worked inr to the paste; then roll it in pretty handfom Balls, and throw it into the pond within the compass of your Casting-Net; but between whiles throw in some Gtains; and when you think the Fish hath found out the baiting-place, when you intend to fish, bait it with these Ingredients made up into a paste that I have directed; bait them in the morning betimes, then come in the dusk of the evening, and cast your Net over the place where you baited; then take a long pole with a large fork made for the purpose,

pose, and the Net still lying, stir all about the Net, for the Carps and Tench are struck up to the Ears in Mud, and stand exactly upon their Heads; let the Net lie a quarter of an hour at least, still stirring with your Pole, if your place be not too deep; when you have covered the Fish, you may go into the Pond and take them all out with your hands, which I have several times seen done; but if it be, when you find the Carps begin to stir, (for they cannot lie long in the Mud) then lift up the Crown of your Net bolt up-right with a long-Staff, that so the Fish may play into the tuck of the Net. If you should draw up your Net presently after you had cast it in, it were a hundred to one if you had a Carp; but letting the Net lie, the Mud will choak them in half an hours time; and likewise you must keep stirring them up with your long Staff, till you find them struck into your Tuck, which you must keep lifted up after your stirring them. I shall relate a short Story of what I see done; A Gentleman had special Carps in his Pond, but knew not which way to take one, but by chance with Hook and Line; I did desire him we might eat two or three of his Carps; he answered, with all his heart if I could tell how to take them; I prepared some Ingredients, and having baited a place convenient in the morning very betimes, and in the dusk of the evening we came with our Casting-Net, and at the throw covered a very great parcel of Fish, as by the sequel of the Story will appear, but not one seemed to stir or wag under the Net, being all struck into the Mud; The Gentleman laughed, and said he was like to have but a slender Supper of Fish, and that he was afraid he should have been forced to

send out for Butter to make Sauce, I desired him he would have patience, so the Fish were a-sleep, but I did not question but to awake them half an hour hence: for the Gentleman having smoaked a Pipe of Tobacco, a Carp began to play in the Net, I think, says he, they have been a sleep indeed, that could not understand there was a Net over them all this while; then I began to stir with my long Pole to awaken them, and before you could tell an hundred they began to dance in the Net; then I lifted up the Crown for them to play into the Tuck; and when I thought they were all out of the Mud I began to draw, and at one draught drew up in the Net seventy odd Carps great and small, to the admiration and great satisfaction of the owner and the rest of the company, having in all their life-time not seen the like before. *Probatum est.*

An approved way to take a Hern.

A Hern being as great a devourer of Fish as any is, I will affirm ten times as much as the Otter, and shall destroy a Pond more in one week, than an Otter shall do in three months, for I have seen a Hern that hath been shot at a Pond to have seventeen Carps at once in his Belly, which he will digest in six or seven hours, and to fishing again: (I see a Carp taken out of a Herns Belly nine inches and a half long); for several Gentlemen that have kept them tame, have put Fish in a Tub, and tryed the Hern how many small Roches and Dace he would eat in a day, and they have found him to eat above 50 a day one day with another. One Hern that haunts a Pond, in a year shall destroy a thousand
Store-

store Carps, and when Gentlemen sue their Ponds; think their Neighbours have robbed them, not in the least considering a Hern is able to devour them in half a years time, if he put in 1500 Stores. Now the best way to take this grand Enemy to Fish, is thus; Having found out his haunt, get three or four small Roches or Dace, and have a strong Hook with a Wire to it; draw the Wire just within-side the Skin of the Fish, beginning without-side of the Gills running of it to the Tail, and then the Fish will lie five or six days alive, for if the Fish be dead, the Hern will not touch him; let not your Hook be too rank, then having a strong Line with Silk and Wire, about two yards and a half long, (if you twist not Wire with your Silk, his sharp Bill will bite it in two immediately) and tie a round Stone about a pound weight to the Line, and lay three or four Hooks, and in two or three nights you shall not fail to have him if he comes to your Pond; lay not your Hooks in the deep Water where the Hern cannot wade to them, for if you do, they may lie long enough before you see the effect of your pains: colour your line of a dark green, for a Hern is a very subtle Bird. There are several other Devourers, as your Otter, Water-Rat, Kings-fisher, More-Hens, Balcoots, and your Cormorant; but none like the Hern for your Ponds and small Rivers.

*An excellent way to take all manner of small
Birds with Bird-lime.*

IN Winter, and especially in a Snow, all sorts of small Birds will begin to flock together, as Larks, Chafinches, Lennets, and Yellow-hammers; which

when you see about the House or Field adjacent, having your Bird-lime provided of the best sort, and not too old ; order it thus, take an Earthen Dish and put your Bird-lime with some Capon's-grease or fresh Lard ; put to a quarter of a pound of Bird-lime, half an ounce of Capon's-grease or Lard ; then set it over the fire, and let it melt gently together ; for if it boil, you take away the strength of the Bird-lime. Having thus ordered it, and made it fit for use. Then go into the Barn, and chuse out an hundred of large Wheat-ears, and cut the Straw about a foot long besides the Ears ; then from the bottom of the Ears to the middle of the Straw, lime it about six or seven inches ; let your Lime be warm when you lime the Straw, that so it may run thin upon the Straw, and less discernable to the Birds : When you have so done, go into your Field hard by your House, and carry a little Bag of Chaff and threshed Ears, and scatter these fourteen or fifteen yards wide, (it is best in a Snow) ; Then take Ears that are limed, and stick them up and down in the Snow, with the Ears leaning, or at the end touching the ground ; then retire from the place, and drive them from any other haunt, and you will presently see great flocks of Birds come to the place, and begin to peck the Ears of Corn, and fly away with them ; which as soon as he mounts, the Straw that is Bird-limb'd laps under his Wing, and down he falls, not perceiving himself to be hanged ; for I have seen many eat their Ears when they have been fast limed under the Wing ; therefore you must not go when three or four or more are taken, but let them alone till a dozen or two are hampered ; here in the Field you
take

take most upon Larks ; I have taken six dozen in a morning. You may lay some near home to take all manner of Finches and especially Sparrows (which is the Farmers Enemy of all small Birds) for they will not come into the Field so far from the House ; let me tell you, Every dozen of Sparrows you take in Winter, shall save you a quarter of Wheat before Harvest : therefore stick your Ears about the House-tops, and though you never have the Birds, yet the destruction of them will be a great advantage. Having had this morning-Recreation, go and bait the place with a Bag or two of more Ears and Chaff, and let them rest till next morning ; then take some fresh Wheat-Ears again, and stick them as you did before. When you bait in the afternoon, take away all your limed Ears, that so the Birds may feed boldly and not be frightened against next morning.

A true and exact way to make your best Water

Bird-lime to take Snipes, or any other

that delighteth in the Water.

BUY a pound of the strongest Bird-lime you can get, and being washed nine times in clear spring Water till you find it very plyable, and the hardness quite extinguished, then beat out the Water extraordinary well till you cannot perceive a drop to appear ; then cause it to be well dried ; having so done, put it into an earthen Pot, and add thereto as much of the best Capon-Grease without Salt as will make it run ; then add two Spoonfuls of strong Vinegar, and a Spoonful of the best Sallet-Oil, and a small quantity of Venice Turpentine, and boil them all gently together upon a soft fire, stirring it continually ; then take it from

the fire and let it cool ; and when at any time you have occasion to use it, warm it, and then anoint your Twigs, or Straws, or any other small things, and no Water will take away the strength: This sort of Bird-lime is the best, and especially for Snipes and Felsares.

How to take Snipes and Felsares with this Water Bird-lime.

VWith this Bird lime so ordered, take two or three hundred of Birch-twigs, and lime forty or fifty of them together very well ; then finding out the haunt of the Snipes, which you shall perceive by their Dung ; and in very hard Weather, where the Water lies open, they will lie very thick ; then observing the place where they most feed, set two or three hundred of your twigs at a yard distance ; let them stand sloping, some one way, and some another ; then retire two or three hundred paces from the place, and you shall find there shall not one Snipe in ten miss your Twigs, by reason they spread their Wings, and fetch a round close to the ground before they light : when you see any taken stir not at first, for he will feed with the Twigs under his Wings ; and as others come over the place, he will be a cause to intice them. But when you see the Coast clear, and but few that be not taken, go and take up your Birds, and fasten one or two, that the other flying over may come to the same place ; if there be any other open place there by, put them off from those Haunts ; they will lie where it is open and a Spring very much, for they can feed in no hard place by reason of their Bills ; in a
Snow

Snow you shall have them extraordinary thick in such a place.

How to take Felfares.

VWhen time is, which is about *Michaelmas*, take your Gun and kill a Felfare or two, and then lay them or set them in such order that they may seem to sit alive upon a Tree; then having prepared your Twigs, about two or three hundred or more, take a great Burchen Bough, and cut off all the small Twigs; make little Holes and Clefts in all places about the Bough, and there place in your Twigs; then set the Felfare upon the top of the Bough making of him fast, that he may seem to be alive, (let this Bough of Bird-lime Twigs be set near where they come in a morning to feed, for they keep a constant place till their Food is gone) that so others flying but near, will quickly espie the top Bird, and fall in whole flocks to him; I have seen at one fall almost two dozen taken.

How to take Pidgeons with Lime-twigs.

VWhen you find any Ground much used with Pigeons, which is a very great devourer of Corn; get a couple of Pigeons dead or alive, if they be dead, order them to stand stiff as if they were living and a-feeding; ; then at Sun-rise take your twigs, what quantity you please, let them be very small (wheaten straws are as good or better) & place them up and down where your two Pigeons are set, and you shall find that sport at every fall that is made that you may quickly be rid of them without offend-

ding the Statute ; two or three dozen is nothing to take in a morning, if there come good flights.

*How to take Crowes, Pyes, and Glead
with Lime-twigs.*

WHen you have a Horse or any other Carrion that is dead and stripped, and when you have found that Crows, Pyes, and Kites have found out their Prey, over-night set your Lime-twigs up and down the Carrion, let them be very small and not set too thick, for they are very subtle Birds ; when you perceive one to be fast, stir not, for many times they have been caught, and have not been sensible of it : Likewise you may joyn to a Packthread several Nooses of Hair up and down the Packthread, and peg it down about a yard from the Carrion, for many times when they have gotten a piece, they will be apt to run away to feed by themselves ; and if your Nooses be thick, it is two to one but some of the Nooses catch him by the Legs.

*How to take Crows and Rooks when they
pull up the Corn by the Roots.*

TAke some thick brown Paper, and divide a sheet into eight parts, and make them up like Sugar-Loves ; then lime the inside of the Paper a very little, (let them be limed three or four days before you set them), then put some Corn in them, and lay fifty or sixty of them up and down the Ground, lay them as much as you can under some clod of Earth, and early in the morning before they come to feed ; and then stand at a distance and you will see excellent

excellent sport, for as soon as Rook, Crow, or Pigeon comes to peck out any of the Corn, it will hang upon his Head, and he will immediately fly bolt up-right so high, that he shall seem like a small Bird, and when he is spent, come tumbling as if he was shot in the Air. You may take them at plowing-time when the Rooks and Crows follow the Plow, but then you must put in Worms and great Maggots.

How to make Hogs thrive.

IT is always observed among Country-Men, that a Hog never thrives when his Hair stares and looks rugged like a Bear, therefore observe this Rule once a month, and you shall have the best Hogs in the Country. Take half a peck of Ashes or a Peck, and boil them into a Lie; then having an old Curry-Comb ready, lay the Hog upon a sourm, then wet him well with the Lye, then Curry him with your Comb till you find all his Scurff wasted from his Skin, then with Water wash him as clean as a Porket, and strew him full of dry Ashes, and this will kill all the Lice, and make them thrive extraordinary. If you do not believe what I write, try one or two and you shall easily perceive a very great difference in a months time; the greatest thing that I know which hinders the thriving of Hogs, is to let them lie too long in Straw, for if they have but a dry house, and a drie place to lie upon, never trouble your self for Straw, for it makes them Lousie and full of a dry Scurf which hinders their growth.

How

How to make Cabbage-Plants grow great Cabbages in very Barren-Ground.

THere be several poor People in this Kingdom which are ready to be starved, which live near Heaths, (were it not for the convenience of Firing, which they have at a cheap rate) by reason the ground is so barren, that they know not which way to make any thing grow or thrive; for having planted the best sort of your Cabbage-Plants, they turn all into pitiful Coleworts, and so reap little benefit or none at all, though they lay a load of Dung upon every Pole, the Ground is so dried and so barren. Now I shall direct you how with half a load of Dung allowed to every Pole, to have as large and big Cabbages, as if you laid six load upon a Pole; Having got two or three hundred of good short-knotted, and well-stocked Plants, for otherwise they will turn to Coleworts in the best of Grounds, then consider how many Plants a Pole of Ground will take up to set them at a convenient distance; then set them out, and dig as many holes about half a yard wide as you intend to set Plants; then fill up the Holes with Dung, and put some Earth into every Hole, and mix it well together with the Dung, let three quarters of it be Dung, then plant the Cabbage in the midst of the Hole, (let there be half a foot of Dung and Mold below the Root of the Plant) and then water it very well three or four times in a week, if need require, that so the Plant may take good root; upon any dry time, you must give him water, that so the Cabbage may not be at a stand; and when you see him begin to turn in his Leaves, for leasing, heave up

up the Earth to the Cabbage, set them not too thick, that so they may have room to spread ; thirty in a Pole will be sufficient , for the richest Ground, if they stand too close, produce little thing else but Coleworts : In setting of these thirty Plants half a load of good Dung will do it to every Pole ; so every year the Ground will be enriched with little or no charge considering the Crop it will bear ; I have my self, Dung being scarce, (as always it is in barren places) with two load planted four Pole of ground, which was very barren, being upon a gravelly Heath, and several of my Neighbours coming by in the interim, laughed to see me plant Cabbage-Plants in so barren gravelly Soil ; for they not seeing the Dung put into the Holes, never imagined that I had set my Cabbage-plants in almost all Dung and fine Mold ; but when they came towards Winter to see the fruits of my Labour, they stood like Men amazed, and would not believe their own eyes, but thought the Plants enchanted, (there was eighty odd leaved Cabbages, and very many weighed above 20 pound a Cabbage) ; which to satisfy their curiosity, and being willing to further them what I could, I pulled up one and shewed them exactly which way it was performed ; and since hundreds have learnt it, to their great improvement of their little ground.

Many of your poor People by all these Heath-sides keep a Cow, which makes them two or three load of Dung in a year ; which being laid upon five or six Pole of Ground, and spread abroad, and spiked in, only refreshes the Ground and that is all, for the barren Ground being only sprinkled, eats out the heart of the Dung and produceth no crop ;
but

but this way in time will make the Ground good with no charge, considering the profits as you will find by experience to arise.

To make Garden-Beans grow in a Barren Soyl.

TAKE your largest sort of Garden-Beans, and lay them twelve hours in the strongest Brine: Then having digged your Ground very well where your Cabbages grew last year, observe the Rows where the Cabbages stood; then hew a Trench through these rows pretty deep, but not wide, and cast in four or five shovels full of good Dung, and mix the Earth and Dung together; then lay your Beans a foot apart, and cover them over not too deep in the Ground, for I have seen by experience one sort of Bean in the same Ground, and being set deep, hath not thrived half so well as those that have been shallower, for I am of opinion that they spend much of their strength before they get out of the Ground, except the Ground be extraordinary good and deep; for you must take notice that a Bean hath a downright Root, and if it be set deep, and the Ground poor that it roots into, how can you expect any thing of a crop again? You that live in barren Soils, observe this way of planting your Beans, and with little charge you shall find an extraordinary crop crown your Labours beyond what you can imagine or think; and in time your Ground will become good, and you will be never sensible of the charge thereof: If it should happen to be a dry time, keep them watered three or four times a week, and you shall at last find the benefit of a little trouble.

*An approved way to destroy all manner of
Field-Mice.*

I Know not a greater Enemy than your Field-Mice to your Garden Beans and Pease, as many poor People and others have found by experience; having found their Beans and Pease, dug them up when they have been an inch above-ground. Now to destroy these Vermine, get an earthen Pot about two foot deep, and at the bottom put Wheat-Ears and Hemp-seeds, with a few Pease, and have a Board that may play into the Pot, being baited at one end with Oatmeal and Lard, that so those that will not venture in, may be deceived by the Board; lay some Pease-haume over this Pot, set it upon sticks, that so it may lie hollow, that the Mice may not be afraid to play about it: This is one way of destroying them, but none of the best, for they lie scattered up and down the Fields, and never venture far from the Hedge-side.

*Another approved way, which is the best I ever
saw to destroy Field-Mice.*

Field Mice is one of the greatest Enemies the poor Gardiner hath, for he is worse than a Mole, for he will scratch up Beans and Pease when they are an inch or more above the Ground, which hath proved a very great loss to him, being disappointed in his early Crop; I have seen in one night whole rows of Beans and Pease so destroyed with these Field-Mice, as if a Hog had been amongst them; and the Gardiner making a lamentable complaint to
me,

me, told me how he was deceived in his Crop, I am forced to plant them near the Hedg for warmth, and these Mice if they find them not at first, yet they never fail them when they appear above-ground: I told him for his first half bushel of Pease, I would direct him such a way, that in five or six nights time should destroy all his Enemies: He being content thus, I instructed him, I bid him get a piece of Deal-board and cut it into thin slices, and make them pretty smooth, and cut twenty pieces of six inches long, twenty pieces of two inches, and twenty of three inches long; then cut a notch in the side of that piece which is six inches, about two inches from the end, and a cross notch upon the flat side within half an inch of the end; then the other of two inches to cut it taper at one end, and a cross notch on the flat side made within half an inch of the end; then the Stick that is two inches and a half must be taper at one end, that so the cross notch may in the stick of two inches, rest upon the top of the two inches and a half; and then the two inches must at the taper end go into the Stick that is six inches, and the notch of the side will be a stay to hold up the Tiles; then take forty Tiles, and they will serve for twenty Traps, and fit them as near as you can to fall close together: Then take your three Sticks, your six inches, three and two inch sticks, and place your three inch stick to the edge of your undermost bottom Tile; then take your two inch stick, and place the notch of it upon the taper end of your three notch stick; then take your six inches stick, and set the taper end of the two inch stick, in the notch that is at the end of the six inch stick; then the notch of the side
of

of the six inches, must hook into the side of the three inch stick, otherwise, the weight of the Tile will make the sticks fly all apart; if it stand when it is set exactly like a figure of four, you shall see every part exactly in the Frontice piece; you must bait the end of your six inch stick with Lard, and dip it into Oatmeal, bait but your uppermost side; then having set them all along the Hedg-sides, you will find such a destruction; according to the number you set, that is not imaginable, for the Trap very seldom misses: And when you go in the morning to see your Traps, take a little Lard and Oatmeal to refresh them where the Mice are caught: the Traps will stand a month without baiting, or new setting, except some body throw it down, or many times the Wind, if it be very high, may be the occasion of its fall: I have taken abundance of little Birds called your Titmice, which is a very mischievous Bird to Buds of Trees. The Gardiner with fifty Traps, destroyed, in four nights, about one hundred and twenty Mice, and continued less for eight days together; he had not a Bean nor a Pea tucked after he set these Traps. I will undertake to destroy five hundred Field-Mice in less than a fortnights time, with a hundred of these Traps: You will find this Trap the greatest destroyer of these Mice that ever was made; you may make twenty of them in an hour, and set them in an hour more; do but experience what I have writ, if you be troubled with them, and you shall find every tittle thereof true; your six inch stick must be very thin, otherwise it will cause the Tiles to lie hollow and then the Mouse will make his escape; but if thin, and the Tiles fall close, you shall find him as flat as a Flounder.

*A new way to make Arbours to become Green
and Shady in one Year.*

First, Set out the proportion of your Arbour for Length, or Breadth, and Height ; then imploy some of your Servants or Country-men to gather the streightest and smoothest white Weathy Rods, without knots, three or four inches about ; then make holes with a Crow of Iron, and place your Rods about a foot and a half distance, more or less, according to the fancy that best pleases the Planter, and at least two foot into the Ground : when you have so done, let your cross Rods which makes the square be of the durablest Wood you can get ; and at every cross Joint bind them fast with your weathy Bark and not with Wire, because those that stand in the Ground should grow and not be cut into with the Wire : let your Rods which stand in the Ground be taper at one end, and then your Arbour will come over with an Arch at the top ; I would advise you to let your Rods which stand in the Ground be of your white sort of Weathy, and then they will not decay in a short time, for they will grow, and be some addition of shade ; but for your cross Rods, the durablest wood is the best : If your Arbour should be made of Rods, which will not grow in three years time or less, all your Labour is lost, which hath been too much the indiscretion of Gardiners for many years ; if the cross Rods fail in two or three years, you may quickly supply them without any prejudice to the Arbour. After your Arbour is thus made, then imploy some of your Servants or Labouring-Men to go into the Fields,
and

and take up ten or twelve of your wild Vines or Brionies, every Country-man almost knows them, they usually grow by Hedg-sides or in Ditches; they bear a Leaf like a Vine, and the Roots are commonly as big as a Man's Thigh; they that take them up must do it with a deal of care, for the Roots are very bricly, and will break off if they be not careful: Now having gotten ten or twelve Roots, cut them smooth at all the little ends, and set them about two foot distance or less, according as you will have the Arbour shadowed; and if it be a very dry time, water them three or four times the first year, but very well when you set them, and in three months time you will have an Arbour so thick and so pleasant, for the shadow and sweetness of the Flowers it bears, that People will hardly believe their own Eyes, but think it an Apparition; which the other sort of Arbours made all of dead Rods, in two or three years will decay and all come to nothing; but this way will continue many years, being every way beneficial.

How to Water an Orchard after a new fashion.

HERE I shall shew you how to water several Orchards for very little cost; but no Body is so ignorant to imagine that every one can be so, except they lie convenient; If your Orchard lies upon the side of a Hill near any High-way, and the High-way lie somewhat higher than the Orchard; then provide against any good shower of Rain, (which in *April* we commonly have enough) make one great Trench through the Hedg, and from that Trench make several small ones which may lead to every
C Tree,

Tree, to conduct the Water from one Tree to another throughout the Orchard, one such watering shall enliven your Trees more than ten showers of Rain. When you go to turn the Water into the Orchard, you must make a Dam cross the Highway; otherwise your Trees may be parched for want of Water: If your Orchard lies drooping upon the side of a Hill, and the next adjoining Ground higher, though no High-way lie near it, yet taking your opportunity, may do thus; View round your Orchard, and consider which end lies most convenient to carry your Water throughout your whole Orchard, for you must begin with the highest part first; when you have thus taken the level of your Orchard, see where the greatest Current of water may fall, and from that place begin your main Trench, and let it go through your Orchard; and from this large Drain cause another less to water the first row of Trees, and so to the second; if you find your water prove scanty, and you cannot water all your Orchard at once, order it for twice, thus; Make a side Trench that may carry the water to the third or fourth row, and never spend any upon the first row at all; Now if you have no High-way, nor convenient Lane nor Ditch that carries any course of water, that may prove any way beneficial to the watering of your Orchard; yet if your Orchard lean any way, with Trenches made to the Trees upon any sudden shower, a great deal of Water may be conveyed to them, that falls in the Ground where they stand; so let any Orchard stand almost how it will, with skill, care, and diligence, and small charge, you will be able to cause your Orchard to return treble profit for the first years

years expence : But suppose your Orchard lies upon an exact Flat, yet if the Country-Man bestowed a small Tub of water to every Tree, (especially if old and big Trees) he would find the profit of it at the years end ; for you must observe, when any Tree grows and spreads, it keeps the Rain from the Roots.

I shall now faithfully relate what was the event of this kind of watering. There was a Farmer that took a small Farm in *Oxfordshire*, about twenty pound a year, not far from *Reading*, he took a Lease of five years, and lived two years in it, and received no benefit worth mentioning of his Orchard ; I riding that way, with a Friend which was his acquaintance, he called in to see the Farmer ; and having a little refreshed our selves, we walked out to see his Ground, which was very poor ; and at last going into his Orchard, the poor Farmer fetched a great sigh : O, says he, would all these Trees were chopped up by the Roots, for this Orchard is special good Ground, but I have no benefit of it ; for if I sow it, the shade of the Trees and Birds devour all my Corn, and I have not had twenty Bushels of Apples this two years off from it, and I took it for the benefit of the Orchard, which was between three and four Acres of Ground : Country-Man (says I) you know not what Riches you have near you, for I will direct you a way to make this Orchard pay all your Rent, give me but a Hoghead of Sider ; But (says he) my Orchard must first find Apples : I perswaded him to take a Lease of one and 20 years, for I told him he had the best penny-worth in *Oxfordshire* ; but his answer was, I wish I was well rid of this : VVell, if it be so, observe my

Directions, and you need not fear but your Orchard will pay your Rent; so having viewed his Orchard round, within a little space distant from his Orchard went the High-way; I told him the convenience of this High-way would pay his Rent; How can that be when I sell neither Beer nor Ale? I desired him immediately to get me two or three Labourers and I would direct them; I brought the VVater from the High-way, by making of a Dam through the middle of the small Ground into the Orchard; then from that Trench I caused them to cut out several other Trenches, leading to every row of Trees, and made them dig a yard round every Tree that the VVater may have time to soak into the Ground, having good compass round the Tree. Notwithstanding all this, he had not so much Faith to take a new Lease, but first desired to see the event of this new Invention: This was about the middle of *February*; I directed him also to smother his Orchard with Muck and Fern, (which way to order is treated of in another place) and continue it so long as the wind should hold any way Easterly or Northerly. At the latter end of *September*, Business calling me that way, I called upon the Farmer to know how his Orchard thrived; with a merry countenance he replied, I have Apples enough to pay my Rent, and punctually performed his promise with an over-plus; I advised him now to take a new Lease, which then was too late, for his Landlord had been there and seen the Improvement, and would not let him a new Lease under 30*l. per Annum*; for he was of an opinion, this way would not fail in causing the Orchard to bear; the Lease being expired, the Landlord keeps the

the Orchard, and lets the Ground for 15 *l.* per Annum. The Orchard is duly worth to him twenty pound a year more ; that year when the improvement was made he had about sixty quarters of Apples ; he fatted his Hogs with the worst, and sold the best at a good rate ; All his charges amounted but to 18 *s.* and 9 *d.*

How to order old decayed Trees, to make them bear as well as ever.

ABout the end of *October*, or beginning of *November*, or later, until the rising of the Sap, cut such superfluous branches as seem too thick in the middle of the Tree, or those which through extraordinary high Winds have been bruised or broken ; then having a scraping-Knife, scrape off the Moss, that grows about the principal Limbs of the Tree, which with a Knife made convenient for the purpose, a Man will cleanse forty or fifty in a days time ; for this Moss is full as bad for the Apple-Trees as Ivy is for the Oak : this being performed, dig the Earth a yard round every Tree, and a spit deep, which let lie open all the Winter till the middle of *March* ; then give your Orchard a good watering, and if you cannot conveniently, then get a small Cart with a barrel, and bestow a barrel of water to a Tree and fill it up with Dung, and lay the Mold upon the Dung ; then about the latter end of *May* give each Tree a barrel full of Water, and you shall find the Trees shall flourish and shoot out Cienes to admiration, and shall bear again as well as if it was in its prime ; some may say, The Remedy is worse than the Disease, thinking it too

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great a charge : To which I answer, I will hire a Man by the groat, shall at any time undertake the performance of all that belongs to dressing and ordering of them for fourpence a Tree ; and I question not but every Tree will afford ten times as much advantage in the first years bearing.

How to order an Orchard that it shall never miss Bearing.

I Have seen several Orchards that have been blown as white as a sheet, but when the Blossoms have been gone, there hath been no appearance of Fruit ; therefore follow these Directions, and your Trees shall not fail to be extraordinary well hung, for I can assure you of my own knowledg, and several others Experience, that when most Orchards have miscarried, their Trees could not stand under their burden : When you perceive there is an Easterly or North-easterly red wind, which was ever accounted a bliting wind, if you live near any Heathy Ground, then in Summer dry three or four hundred of Turfs ; but if you are not near any Heathy Ground, then take three or four good arms full of muckle Straw, Hay, or Fern, not too wet, nor too dry, and observing which side of the Orchard the Wind blows on ; then laying a good arm-full of Muckle in three or four places, according to the bigness of your Orchard, get some dry Sticks and having kindled them, put an arm-full of Muckle upon the Fire, and it will smoak and smother, and the Wind will drive the Smoak through the whole Orchard ; continue it till the Wind turn out of the Easterly quarter, and it will preserve the
Trees

Trees and Fruit from Blites, and all manner of Flies and Caterpillars, which those sorts of bliting Winds usually bring; when you find the Wind changed to West, North-West, South, or South-West, you may forbear making any smoother, for those winds never hurt; observing this, you shall find that not once in ten times you shall ever miscarry; but on the contrary, have your Trees so furnished with Fruits, in the worst of years, according to your hearts desire. After the same manner you may preserve your VVall-Fruit from Frosts.

A true way to make Watrish Fruit become firm, sound, and sweet.

WHen you find that your Apples are watrish, puffed, or hollow, and will not keep, which if the Ground lie low or near a River, all sorts of Apples will be subject to, and then they eat very unpleasant and will not keep, though it appear a fair handsome beautiful fruit to the eye: Now to cause your Fruit to eat firm and pleasant, observe these directions; About the latter end of *October*, or beginning of *November*, dig round every Tree, about a yard and a half from the Body, and a full Spit deep or more; then fill up the place with the best Chalk, and let it lie open all winter, that the Frost may chasten it, that so it may incorporate with the Earth, and about the end of *March* throw the Earth upon the Chalk, and water the Orchard if you can, and you will find in one year so great a change, and extraordinary benefit accrue to the Fruit of your Orchard, that you shall hardly believe your own taste, and the Apples will be wholesomer,

somer, pleasanter, and keep several months longer than usually they were accustomed to do : if you will not serve all your Orchard, experiment three or four Trees, and you shall quickly find the difference of the Fruit.

*The true way of Planting and Ordering of Melons,
Cucumbers, Pompions, and Colliflowers.*

I Shall begin with the Melon ; First, I shall tell you the reason why we make Hot Beds ; and that is this, To get them forward against Summer comes, that so the Fruit may have time to ripen : In *Spain* and *France* they never make a Hot Bed, by reason their Summer is long and hot ; Melons that grow in those Countries far surpass ours in Taste and Colour. Now your Cucumbers ripen far sooner, and Pompions in half the time, though they be an extraordinary large sort of Fruit ; for they are commonly set in *May*, and ripe in *August* : Now for your Melon and Cucumber, you must begin to make your Hot Bed in the middle of *February*, or latter end, (which I ever found soon enough) ; having provided your self of a warm place, being fenced about with a close Pale, Wall, or Hedg, about six or seven foot high, and being at such a distance from the Bed that the Sun may shine over any time in the day, and especially in the morning ; Now the inclosed being finished, you must bring six or seven load of Horse-dung, six or seven days old ; and thus you must raise your bed, and set up Stakes the length and breadth of your bed ; then take your Dung and shake it, that it may not lie harder in one place than another ; six or seven load will

will make a bed 7 or 8 foot long, 3 foot high, and 3 foot over; tread it not extraordinary hard, let it as near as you can be all over of an equal hardness, for else one Seed will be up before another; having raised your bed to the highest, get a load of pure Horse-Dung, without Straw, and lay it at the top, and wet the Horse-Dung, and beat it very smooth with your spade; then sift some pure Mold, being last years Dung rotted: for if it have any Earth in it, the Melons will not thrive kindly, but most part will be subject to pine away; therefore get the richest Mold you can have sifted on, about four inches or five thick; your Melons and Cucumber-Seed being steeped in Milk twenty four hours, put them in at two or three inches distance with your finger, and about an inch and a half deep; then having some Melon-Glasses ready, cover them, to draw up the heat to the top of the Herbs; Glasses are the best of things to bring up early Melons, for they keep out Wind and Weather, and let in the Sun to comfort them. But as some have directed to place Forks, and lay Sticks upon the Forks, then cover them with Straw, it avails little; for a good shower of Rain, or a small Frost, puts an end to your trouble: your Mat-covering is far better, and cover the Mat over with Straw; no early Melons are to be brought up without Glasses; those that cannot go to the charge of all Glass, make them thus, Make three parts of them Wood, and one part Glass, and let the glassy-side always stand to the Sun, when you open them; when you perceive them to peep above-ground, cover them again about a quarter of an inch with warm Mold from the bottom of the bed; and when they are shot
above-

above-ground, cover up the Stakes close to the Leaves, and when the Sun appears, give them some about ten of the Clock till eleven, and cover your Glais over with some Straw that the Sun prove not too hot ; open that again about two till four ; observe still as the Plants rise, to raise up the Earth to the Leaves : When you find the Bed begin to decay, immediately remove your Plants into another Bed, otherwise your labour and former pains will be lost, for you shall find the Roots in a short time to perish and decay for want of heat ; which when they come into a fresh Bed, they will mount away and grow more in one day than in six before in the other Bed : If you find the Bed to grow dry, steep some Water in Sheeps-Dung, and having made it Blood-warm, water them once in twelve hours or more, according as you shall find occasion : Now having taken out all your best Plants, and planted them about four inches distance in your new Bed, then stir all your Mold of your old Bed, and if it be too dry wet it, and then rake the Earth very even, and sow your Colli-flower seeds in rows, not too thick ; if you should sow them with the Melons and Cucumbers, they would run up such a height with the heat of the Bed, that they would never flower worth a farthing, but being sowed when the Bed is almost cold, they will come up green and be brave stocky Plants ; when they have three Leaves or more, plant them out into the other Melon, (which will be then time to remove the Melon-Plants to stand all the year) and plant the Colly-flowers up to the Leaves, and water them with Water wherein Sheep or Pigeon-Dung hath been soaked, and you shall find them thrive abundantly.

Thus

Thus much for the Colly-flower. Now to Plant the Melons where they shall stand all the year ; dig a large Trench about four foot deep, and three foot over, and place therein some Dung that will heat ; about three foot deep let the Dung be, then make a square hole about a foot deep, and half a yard square, and put some very rich Mold in about half full ; then taking up your Melons very carefully, set three Melons to a Hole, (or two and a Cucumber) and place them triangular, and set deep with some of their warm Mold, that the tops of the Leaves may be level with the top of the Bed ; then set your Glasses upon them and cover them very warm, and water them with Dung-water for two or three days after you have set them, let the Water be Blood-warm ; if it should prove a backward Spring, you must keep them very warm, and not leave them uncovered till all the Frosts be gone ; you must serve your forward Cucumbers after the same manner : But for your latter Cucumbers order them thus ; About the latter end of *March*, or beginning of *April*, dig a Trench as you did for the Melons, and fill it with new Horse-Dung ; your Trench may be from 3 yards to 20, fill it up with new Horse-Dung, and make square holes as when you planted the Melons, and fill the Holes with rich Mold, and set the Seed two inches deep into the Mold ; you may set a dozen Seeds into a hole, and cut the worst away ; when they come up, cover them with Straw or Cabbage-leaves to shelter them from wind and Weather till they have got four or five leaves, and then you may trust them, and not fail of Cucumbers in abundance. Plant your Pompion upon a Dunghil if you can, if not, dig a large Trench
and

and fill it with Dung that may a little heat, and make square Holes, and plant three in a Hole (triangular) in Mold, and when you perceive them above-ground, water them very well with Dung-water, and they will thrive exceeding well; when you see a Pompion kernel'd and grown to the bigness of a Goose Egg, and the Runner shoot forward, and produce another a yard beyond him, lay the Runner half a foot or more in the Ground, and it will shoot out Roots and nourish the other Pompion, for that next the Root intercepts all the Sap from the other, and in two or three days will pine to nothing; observing this direction, you may have nine or ten upon a Root, otherwise very seldom above three. I have seen nine very large ones upon a Root. Now your Colly-flowers having six or seven Leaves are ready to be planted, and order them thus; Dig as many Holes about a foot square and deep, and a yard apart, and make a Hole between every four, then put a shovelful or two of good rotten Dung into every Hole, and mix it well together; then taking up your Plants very carefully with the Mold, set them in so deep that the tops of the leaves may not be so high as the Ground, and water them very well, then lay a Cabbage-leaf over every hole to keep the hot Sun and cold Air from them; if it be a very dry time, water them often, or else you will be deceived in the flowering of them.

How to order Goose-berries and Currans.

WHen you go about to plant your Goose-ber-ry and Curran-garden, chuse out those trees that are streight and without knots, and plant them in Ground well dunged, they thrive best in a sandy Mold ; after they have stood one year, if there be any young Shoots, cut them all off very close to the Body, and suffer not a bushy head, but let it be very thin kept, and then the Sun shall ripen him and he will grow extraordinary large : Order your Currans after the same manner, and Rose also, and your Garden shall look comely and handsome, and bear far better than if they were three-times as big ; every two years you must refresh them with Dung, if you intend to have them very large : If you keep your Goose-berries and Currans to one Head, the shadow of them will do no injury, but you may plant any sort of Flowers or Herbs under them, and they shall prosper and thrive as well as if there were no Trees standing.

How to Preserve and Increase all sorts of Carnations and Auriculasses.

Several People that love and delight in Flowers, and those of the best sort, as Carnations and Auriculasses, yet through ignorance and want of care they very seldom live above two years, so are almost tired and disheartned to renew their former delights ; and the reason is, because they have not the true way of preserving and increasing them : First, How to preserve them ; It hath been an usual way

way to set them in several Pots, and in hard Weather to remove them into the House, which hath proved so troublesome and chargeable (for they must have a little House on purpose) that most are weary of it, except them that make it their livelyhood: Now observe this way, and you shall have better Flowers and lose few; VVhen you have bought your Layers of the best Flowers, set them in a Bed of pure Mold, rooted from Horse-Dung and not Cow-Dung, because it encreaseth VVorms, which will devour the Flowers; when it draws near winter, take some short new Horse-Dung, and lay it at least a foot thick allover the Bed between the Flowers, and have some Earthen pots about a foot deep with their bottoms out to stand over the Flowers to keep the Dung from them, and when it is very hard, cover the top of your pot with a Tile, and it will keep your Flowers from Frost and weat VVeather, which is the destruction of a thousand in a year; when it is a fine day give them Air and Sun-shine, and cover them again at Night, this way shall save you a great deal of trouble to remove them into your House in hard weather: Now to increase them, about *July* or *August*, if you have Slips upon your Flowers, take a sharp Knife, and at a Knot cut it half in two, let the Knot be an inch or more from the Stem, then with a little hooked Stick peg it close to the Ground, and cover it over with Earth like a little Mole-hill; and when you perceive that the Layer hath taken Root, cut it off with a sharp Knife, and take it up Mold and all and plant it out, and so you may encrease your Stock; these great sort of Flowers will not grow with slipping as your Clove-Gilly-Flowers: you must slip

flip your Auriculaffes, and preserve them after the same manner as I directed for the Carnation.

An excellent way to recover any Horse or Cow that is stiff with Cold, being Mired in a Ditch.

I Have seen several Beasts that have happened by some miscarriage to fall into a Ditch or Pond, and having staid some considerable time, they have been so stiff as though they had been dead. Now to recover these deadish stiff Limbs, order him thus; If he be so stiff that he is not in a capacity to go, get a Cart and carry him home, then give him half an ounce of Mithridate in a quart of strong Ale, where a handful of Rue, Angelica and Balm hath been boiled; then put him into a hot Dunghil, and chafe his Joints very well with the Oil of St. John's-Wort and Rue mixed together, and by the next morning you shall find him recovered; but keep anointing of his Legs for three or four days after, and if occasion require, put him another night in the Dung, and give him the like quantity again.

How to order all Physical Herbs growing here, to thrive and prosper.

VERY many People of all sorts have been making of your Physick-Gardens, not for any great use they have made of them, but most out of curiosity to see the variety of p'ants, which not knowing rightly to order, have had the greatest part of them (for want of some instructions) been dead and decayed in two years time; therefore I have here set down some certain approved Rules for their preservation;

vation: First, When you have made your Garden, then consider how many sorts of Earth, and the several shady places for Herbs that love it, for you must consider the nature of the Herb what it delights in. I shall give six or seven Examples which I hope will be sufficient for all; as first, For your Adder-tongue it grows in moist low Grounds and Meadows; if this Herb be planted in a hot ground, it may flourish a little for the first year, but you may look for it in the Meadows the next, therefore plant him in some moist place of the Garden: Angelica is an Herb hot and dry, if you plant it in a cold moist Ground, it pines away and comes not to any thing, therefore the richest Ground is best: Liver-wort is a Herb that delights to grow in moist shady places, as by the heads of Springs and Ponds, and insides of Wells, and is green all the year; this Herb must be planted by some moist Wall or shady Bank, where it sees very little of the Sun, for any heat or dryth kills it: Rosemary is a hot and dry Herb, delights to grow in the Sun, and near a Wall, if that be planted in a cold springy place, it pines away to nothing; if your Ground be very cold, and Rosemary subject to die, mingle half your Mold with Lime and it will thrive and prosper extraordinary: Observe one thing, There is no Herb that grows, if it doth not delight in the Sun, that is good for the Heart. Harts-tongue delights by High-way sides in Banks of Ditches, and not in the bottoms; plant him upon the Bank of some Ditch. Penny-royal delights in a hot and moist place; plant it where it may only have the morning Sun, keep it low, and suffer it not to grow into long Branches, for then it usually dies in the end: Take notice always,

ways, That what Herbs you plant, order the place where you set it, to be of the nature of your Plant; that is, thus; If your Herb be hot and dry, a hot and dry place in your Garden; If cold and dry, a cold and dry place; so hot and moist, and cold and moist: you may know the temperature of any Herb almost by the place where you find him naturally to grow; for it's contrary to Sense and Reason, that cold and moist Herbs should thrive in hot and dry places.

*How to gather Herbs, and a true way
to dry them.*

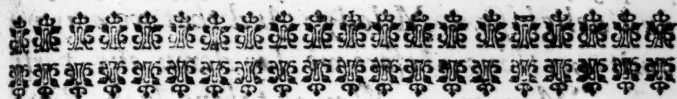
THEY that intend to dry Herbs to have them good, must observe their Times and Seasons: Gather your Herbs where they naturally grow, as your Betony it delights in Woods; gather him when it begins to bud out for flowering; tie them up in small Bunches, and hang it cross the Lines in the Wind and Sun; the quicker you dry any Herbs, the far better it is; gather always in a dry day, and let it not hang where it can rain upon it, for that will make it look black, and also take away the scent; when you have dried them, put them in Brown-Paper-Bags, and before Winter, lay them two or three hours in the Sun, and that will very much refresh them; hang them in a warm dry place, but not too hot, for then the heat will draw out the Spirits of them.

Here is but three things to be observed to have extraordinary good dried Herbs; Gather them in
D the

the Prime, pick them clean from withered rotten Leaves, and dry them quick in the Sun and Wind, to preserve them, keeping them neither too hot nor too cold, and air them in the Sun three or four times in a Winter.

Thus I have in short shewed the Planting, Gathering, and Drying of Herbs.

SOME



S O M E

Further Additions

Concerning

Singing-Birds

WE having spoke before of some varieties for Profit, and also Pleasure in ordering of several sorts of Fruit-Trees and Gardening, and a small touch of Recreation for taking of Fish and Birds; but now I do intend to enter into a Discourse of Taking, Preserving, and Keeping all sorts of Birds which sing melodiously with ravishing sweet and pleasant Songs, wherewith the Master may have his Recreation and Pleasure, by hearing them sing in his Closets, Hedges, Parks, or at his Chamber-Window, or otherwise shut up in some Cages, Rooms, or Aviaries, with Out-lets for them to take the Air made for that

purpose, to contain the Subject of such pleasure and delightful Melody: And that we may not omit anything, before we lay down any particular Manner or Way of taking such Birds, we shall take a short view of the Nature, Breeding, Feeding, and Diseases of the same; for in my Opinion it were almost labour in vain to take Birds, if to the end we may not enjoy their sweet and melodious Songs for some considerable time; for without you know what Meat is agreeable to them, and rightly to order them, and what Diseases and Infirmities they are subject unto, and what Means and Remedies are necessary to be used for their Distemperatures. In the meantime I intend not here to bring in Fabulous Stories and Histories of their Original Breeding, which fantastical Poets have vainly imagined and invented, but resolve to rest my self contented with this strong perswasion, That all Birds from the beginning of the World, were miraculously created by God's Almighty Power, of his own meer Will and Word, whereby he created all other Creatures in the beginning of the World.

Of the Nightingale.

NOW every Man hath almost a several phanſie, ſome make choice of one Bird, ſome of another; but in my choice and opinion, the Nightingale hath the ſuperiority above all others, and almoſt according to the judgment and conſent of every one, ſhe ſingeth with ſo much variety the ſweeteſt and melodiouſeſt of all others. I need not much deſcribe the Bird, by reaſon ſhe is ſufficiently known to moſt People, by reaſon of her plentifulneſs and tameneſs, and far more kept in *Italy* than in any other part of the World, though in moſt Countries I have been, they keep them little or much. They appear to us at the beginning of *April*, (none as yet knowing where their Habitation is during all the *Winter*); I have made ſeveral tryals in the beginning, middle, and latter end of *Auguſt*, of ſeveral Nightingales that I have taken, being ſo extreame fat, that they being turned looſe, could not fly forty yards, and when down, was not able to riſe again, which makes moſt believe that they take up their dwelling here all the *Winter*, and think them to ſleep, for I have had ſeveral, when fat, to be three weeks and not eat one bit of meat, which in ſome ſhort time begins to make her Neſt; uſually ſhe makes it about a foot and a half or two foot above Ground, either in thick Quick-ſet Hedges, or in Beds of Nettles, where old Quick-ſet hath been thrown together, and Nettles grown through, and makes it of ſuch materials as the place affords; ſhe hath commonly young ones at the beginning of the Month of *May*,

when all the Earth is beset and spangled with the curious varieties of all odoriferous Flowers, and pleasant greenness; and in Groves and thick Bushes formed in the likeness of a Wilderness, upon which the Sun in the morning doth cast his cool and temperate Beams, from noon till the setting thereof; she naturally delights to haunt cool places, where small Rivolets, Fountains, and Brooks are accommodated with Groves, Shades, thick Quick-set Hedges, and other well-shadowed places [not far distant. I told afore how I found their Nests made, but some have affirmed to me, That they have found them upon the Ground, at the bottom of Hedges, and amongst wast Grounds; and some of them that have found them upon Banks that have been raised, and then overgrown with thick Grass, in which they have built their Nests; I never found any built in such places, yet I cannot say but other Countries may make the Birds to differ in their Building, though not in their Songs. As for the number of their Eggs it's uncertain, some three or four and some five, according to the strength of their Bodies. Now the Nightingale which I would advise you to keep, let him be of the earliest Birds that is bred in the Spring, for the earlier the better, by reason she will become more perfect in her Songs, for the old one hath more time to sing over, or continues longer in singing than those that are bred later, and you may have better hope and assurance of long living, and being brought up and kept with more ease and safety; for having the Summer before them, they throw off and muce, and cast their Feathers much sooner and quicker than later in the year; for if she cast her Feathers at the end of the year,

year, she is subject to be over-run with certain Vermin which hinders the growth of Feathers, which the cold coming, and finding her bare of Feathers causeth her to die ; which happeneth to several that are latter Birds at the end of Summer, and commonly prove most to be Hens, and if Cocks, seldom worth keeping. The young Nightingals must be taken out of their Nests when they are indifferent well feathered, and not too little, nor too much ; if too much, they will be fullen ; and if too little, if you keep them not very warm, they will die with cold ; and then also they will be much longer a bringing up. Their Meat may be made of Lean Beef, Sheeps-Heart, or Bullocks-Heart ; you shall first pull off the fat Skin that covereth the Heart, and take out the Sinews as clean as you can, then soak the quantity of White-Bread in Water, and squeeze out some of the Water ; then chop it small as if it were for minced Meat ; so with a Stick take up the quantity of a Gray Pea, and give every one three or four such Goblets in an hours time, as long as they shall endure to abide in the Nests ; when they begin to grow strong, and fly out of the Nest when you feed them, then put them into a Cage with several Pearches for them to sit upon, and line them with some Green Bays, for they are very subject to the Cramp at first, and at the bottom of the Cage put some fine Moss or Hay for them to sit on when they please ; always observing to keep them as clean as may be possible, for if you bring them up nasty they will always be so ; and so in all other Birds, it will be convenient to line their Cages against Winter, or else to keep them in some warm place : When you cage them up from

the Nest, put always some of their Meat by them, with a few Ants in it, to teach them to feed themselves. You must keep them a little hungrier than ordinary when you cage them, and then they will sooner take to their Meat, to feed alone; and when he doth feed, be sure to give four or five times a day, a Gobbet or two at a time, for they will not feed enough at first to satisfy themselves; you must make fresh Meat every day in the Summer, otherwise if it stand longer, it will be very subject to stink and turn sower; when they begin to Mould, or cast their Feathers, give them half an Egg, and the other half Sheeps-Heart, with a little Saffron mixed in the Water, for you must make it not too stiff nor too limber, let the Egg be boiled very hard, and not too stale; Give them no Duck-Eggs, for I had 6 Nightingales killed one night with a Duck-Egg. For want of this Meat (using them to it) you may give them some Wood-Larks Meat, which will shew the way of making when I come to treat of that Bird. You may use your Nightingale to several sorts of Meats, so that for three or four days, if you can get no Flesh you may keep them alive. I shall shew you hereafter to make a Paste which shall serve upon all occasions, if you can get no Flesh, I have fed them two or three days with your Red-Worms, and Caterpillars, and Hog-lice, and a few Meal-Worms, to give them now and then a Meal-Worm makes them familiar, so you let them take it out of your hands, but too many spoils them, without they are very poor and drooping,

How

*How to find the Nightingals Nest, and to
take Branchers.*

NOW I have shewed where they Build, and how to Feed and Order them, I shall shew you the way of taking Young and Old. For taking of Young Birds, observe where the Cock sings, and if you find him to sing long in a place, then the Hens sit not far off; but if he hath young ones, he will ever now and then be missing, and then the Hen when you come near her Nest will sweet and cur; and if you have searched long and cannot find them, stick a Meal-Worm or two upon a Thorn, and observe which way he carried it, and stand still, or lie down, and you will hear them when she feeds them, (they make a great noise for so small a Bird); when you have found the Nest, if they be not fledged enough, touch them not, for if you do, they will never tarry in the Nest, and then it will be lost labour, to be deprived of it when you have found it: Now for to take your Branchers, which is young ones that have been bred up by the old ones in the Field, You must go to such places that are most likely for Food, for the Old ones when they have pushed the Young ones out of the Nest, (which we call Pushers) leads them from the place they were bred in, to a place more plentiful of Food, for they commonly destroy all the Food that is near in bringing them up, so are forced to seek out further to preserve their young ones: When you have found where they be, which you shall know by their curring and sweeting; for if you call true, they will answer you immediately; then
making

making observation where they most delight, as you shall perceive by their Dung, and if they be disturbed from the place, to make to it again; Now having all your Tackle by you, scrape in the Ditch or Bank-side (about half a yard or more square) the Earth that it may look fresh, then take a Bird-Trap, or a Net-Trap, which is thus made; Take a Net made of Green Thread or Silk about the compass of a yard, made after the fashion of a Shove-Net to catch Fish, or a Cabbage-Net; then get some of your large sort of Wire, bending of it round, and joyn both ends, which you must put into a short stick about an inch and a half long; then you must have a piece of Iron with two Checks: and a hole of each side, which you must put some Cats-gut or fine Whip-cord three or four times double, that so it may hold the piece of Wood the better that the ends of the Wire is put into, and with a Button of each side of the Iron twist the Whip-cord, that so the Net may play the quicker; you must fasten the Net to the Wire, as they do a Shove-Net to the Hoop; then get a Board of the Compass of your Wire, and joyn your two Checks of Iron at the handle of your Board; then make a Hole in the middle of your Board, and put a piece of Stick about two inches long, and a Hole at the top of your Stick, which you must have a Peg to put in with two Wires, an inch and half, to stick your Meal-Worm upon; then tie a string in the middle of the top of your Net, drawing the Net up, having an eye at the end of the handle to put your Thread through, pull it till it stands upright, then pull it through the Hole of the stick that stands in the middle of your Board, and put your Peg in the Hole,

Hole, and that will hold the String that the Net cannot fall down; you must put two Worms upon the Wires before you put it into the Hole, and set it as gently as you can, that the Bird may throw it down with the first touch; when you have your Net and Worm ready, after you scraped the place, then put some Ants in your Trap-Cage, and upon your Board, put some Worms upon Thorns, and set them at the bottom of your Trap-Cage, little Holes being made for the same purpose to stick in the ends of your Thorns; then plant your Trap near to the place where you heard them call, either in the Ditch or by the Bank-side, or corner of a Hedge, and then walk away, and in a short time you will find them taken; you may set three or four Traps according to your pleasure.

How to Order them when taken.

SO soon as you have taken the Nightingal in *July* or *August*, Tie the end of his Wing with some brown Thread, that so he may not have strength to beat himself against the top and Wires of the Cage, for by this order he will grow tame sooner, and be more apt to eat his Meat, whereas otherwise he will be hard to tame; for seeing himself deprived of his liberty, he becometh not tame till some time after. You shall shut him up in a Cage covered above half with green Bays or brown Paper, or else turn the Cage to the light in some private place, that so at first he be not disturbed, to make him wilder than he would be, for it is convenient for three or four days not to let him see much Company; in the mean time have regard to feed him five or six times at the least

least every day: You must feed him with the Sheeps-Heart and Egg shred small and fine, mingling amongst the same some Red Ants, and three or four Red-Earth-Worms mixed with it; ordering of him thus, for you are to take notice that no Nightingal at the first taking will eat any Sheeps-Heart, or Past, or hard Egg, but live-Meat, as Worms, Ants, Caterpillars or Flies; therefore taking of him out in your hand, you must open his Bill with a Stick, made thin at one end, and holding of it open, give him a Gobbet about the bigness of a Gray-Pea, then when he hath swallowed that, open his Bill and give him another, till he hath had four or five such Bits; then set him some Meat mingled with store of Ants, that when he goes to pick up the Ants, he may eat some of the Sheeps-Heart and Egg with it, put also good store of Ants at the bottom of the Cage to keep him eating, and from being melancholy; at the first you may shred three or four Meal-Worms in his Meat, the better to entice him, that so he may therewith eat some of the Sheeps-Heart by little and little; at last when you perceive him to eat, give him the less Ants in his Meat, and at last give him nothing but the Sheeps-Heart and Egg; if you perceive him to eat it willingly, which thing is easie to be discern'd of any Man of Judgment: These Nightingals that are taken at this time of the year, will not sing till the middle of *October*, and then they will hold in Song till the middle of *June*.

To bring up Nightingals that are taken, from the first of April till the twentieth day.

THe Nightingals that are taken after the first of April until the latter end, are the only Birds in the VWorld for Song, and fit to be brought up; you may go out in the Morning and Evening; and having heard several Birds, make choice of them that have best variety of Song, and hold out their Song without breaking off in several quirks, and is most lavish, throwing of it out at pleasure; you must plant your Trap-Cages or Trap-Nets, as you did formerly for the Branchers which were taken in *June, July, August*; VWhen you go a taking, carry a bottom bag with you, and some Meat in a Gally-Pot to feed him abroad, for if they be over-fasted they seldom live, which at that time in the year they require to be fed every hour, for when you have set your Trap for others, you may sit and refresh them you have in your Bag; be sure to tie their Wings at the end as soon as taken, and put or cut their Feathers from their vent, otherwise they will be subject to clog and bake up their vent, which is present death; when you come home, cram them as I directed in the Branchers, and in the bottom of the Cage put Dirt and Ants, and set some Meat made with Sheeps-Heart and Egg, and mingled with Ants, and two or three Meal-VVorms cut in pieces put into his Pan, and set him in a place that he may see no Body to fright him till he is wonted to the Cage, and hath forgot his former liberty; be sure to feed him seven or eight times a day, with three or four pieces of Meat as big as a Pea, opening his
Bill

Bill with a thin Stick, as I directed before, for at this time of the year they are apter to die for want of Food by one half than in *July* or *August*, when you perceive him to eat the Meat with the Ants and Meal-worms, for usually at first for two or three days they will pick out all the Ants and Meal-Worms, and eat not one bit of the Sheeps-Heart and Egg, and the reason is, That they feeding only upon live-Meat, do not know that any thing is for Food but what stirs; when you perceive certainly that she eats of the Meat as well as Ants and Meal-Worms, put but a few Ants in, and in a day or two none at all; then by degrees shew him more openly to peoples sight: but if you find he is sullen, as many will be, you must have the more patience, (for there is very great difference in the humors of them, as shall be shewed hereafter) and get some Gentles or Maggots, and take your Paste and roll it up in pieces like unto little Worms about half an inch long, and put amongst them some Ants, and put your Maggots at the bottom of your Pan; then put your Paste rolled like Worms upon the Maggots, and them stirring at the bottom will make the Paste move as if it were alive, which will cause the Nightingal to eat it more readily than ordinary; and when he hath tasted the Paste or Meat made of Sheeps-Heart two or three times, he then is not apt to forsake it: but if you find him at first eating to eat sparingly, cram him two or three times a day, and give him store of Ants and their Eggs, for there are some Old ones that do as far exceed their Young as Gold is beyond Silver; for I have for many years observed, That Nestlings nor Branchers, except they have an old Bird to sing over them,

them, have not the true Song for the first year; only that this can be said for them, They are a bold lavish Bird, and so many do approve of them because of their familiarnefs.

To know whether the Nightingal eats, and is likely to prove good.

WHen you have accustomed him that he begins to be tame, and hear him to cur and sweet with cheerfulness, and record safely to himself, it is a certain sign he eateth, and you need not further trouble your self about cramming of him; some will sing before they feed, and them commonly prove very good Birds; also your Birds that are long a-feeding, and make no curring nor sweeting for the space of eight or ten days, seldom prove good, for they are Hens, or Birds not worth keeping, or continue a whole month without singing: But on the contrary, They give great hope of proving well, when they take their Meat kindly, and are familiar and not buckish, and sing quickly, and learn to eat of themselves without much trouble, it's a sure token of their proving excellent Birds, for I have had some Birds feed in twelve hours after taking of them, and sing in two or three days, and them never have proved bad. And again, I had a Bird that was fourteen days and would not eat, but when he did, was not worth the Meat he eat: If you have a Bird that will flutter and bolt up his Head against the top of the Cage in the night, never keep him, for he is never good, but doth a far greater mischief, he causeth all the other, by his evil example, to beat themselves also; for nothing
can

can be more prejudicial to a Bird than to bruise himself, which is a sign he takes no pleasure in his Habitation; therefore either turn him loose with a mark to be known, or wring off his head that no Body may further be troubled with his ill qualities, than which none can be worse.

How to know the Cock Nightingal from the Hen.

THe Opinions and several Judgments of Men concerning Nightingals, (that is) namely, to have any perfect rule to know one Sex from another, are very sundry and divers, you must understand those are for old Birds taken in the Spring; I shall give you several Mens Opinions, and then my own at last, (for it is a very great vexation to keep your Hens four or five months instead of Cocks, and not only the trouble and charge, but to be frustrated in our expectation, at last expecting a great deal of pleasure, it proves a vexation.) First, Some do undertake to distinguish the Cock from the Hen, by their grossness, saying, That the Cock is much the larger and fuller Bird, both in length and bigness: Others are of Opinion, That the Cock hath a greater Eye, a longer Beak, and a reddish Tail: Others again distinguish by the Pinnion of the VVing, and the Feathers upon the Head: All which Opinions and Judgments; I have found very deceitful, and far wide of the true and perfect knowledge of the Truth, for I have had perfect brave Cocks, Song-Nightingals, and that a great number of them that have been very small and little, having all the marks ascribed to them to be Hens, and Hens with several Marks that have been assigned to the Cocks:
VVhere-

Wherefore for a more sure and certain sign, you shall be put out of doubt, and trust to these following Observations. First, As concerning your Nestlings that are taken out from the Old ones in the Nest before they can feed; observe this Rule, and mark it well, That if any of the young birds or Nestlings (before they can feed themselves) do record something of Song to themselves; and if you mark them well, you shall perceive their Throats to wag when they record: Mark, those birds for your use, for it's a certain sign, as I have experimented it, that they are all Cocks; but when they come to feed themselves, the Hen will Record as well as the Cock; therefore give him some mark when they are young, for it is very difficult to distinguish afterward. In the next place, is your Brancher, which the old bird hath brought up to feed himself before you take him; when you have taken this bird, and he feeds himself, he will presently begin to Record, both Cocks and Hens; but the Cock is much differing from the Hen, for the Cock continues his recording much longer than the Hen, and louder, and much oftner in the day-time; and also you shall perceive the Cock to sweet and cur much oftner than the Hen, and also with more Spirit and much louder, and usually you will find him standing upon one Leg, and holding on his warbling notes, which you shall perceive by the motion of his breast, with a long continuance, which is not to be found in the Hen, for she goeth hopping and whistling up and down the Cage, making a Noise more like than a Song, that is very much interrupted and short.

*To order the Nightingal which eateth alone
and singeth.*

WHen you shall find that the Nightingal that eats well by himself, and that sings often, without seeming to be disturbed at every little noise, you shall by little and little put back the Green-Bays wherewith the fore-side of the Cage is covered (for those Cages are most convenient for Nightingals, that have the Wire only afore, and all the other parts made up; though I have many times kept them in Wood-Lark Cages, but I do not find them so convenient, by reason of the warmth; and then the Nightingal being a buckish Bird, is apt to strike his Head against the top-wires, which very often proves his death, for no Nightingal is fit to be put in one of those open Cages, but those that are very tame and familiar; and most people are deficient in lining the other Nightingal cages at top, which is very necessary, for many Birds have beat out their brains (against the top-board for want of lining) every day a little in such sort that the Bird may not perceive it; and as you uncover him, set him by little and little more in the sight of People, that so he may grow bolder, and not be frightened with the light and motions of People, nor with any sudden noise; the best way is to hang him towards the top of the Cieling upon a Nail, for they do not delight to hang low; for if he be full in Song, and you hang him upon a sudden amongst much Company, and open, or put back the Green-Bays, and give him too much light all at once, he will immediately break off singing, and ten to one if he sings till

next

next *October* following; then you must take great care that you do all things by degrees; for notwithstanding I have read in natural Histories, That it is very hard and difficult to bring him to singing, if you breed him not up from the Nest; which Opinion of the Ancient Philosophers hath proved very ridiculous and false, by many hundred ordinary Experiments; for it is very often seen (and I have often proved) that old Nightingals are far perfecter and far excellenter in their Songs than any Nestling or Brancher whatsoever, and will come to sing as lavish and as often, and with care and a little trouble will know you, and be as familiar also. I will not deny, notwithstanding what I have said, but some that have been curious observers of Marks, may if they take them together; but this is that I affirm, That several have been mightily deceived by those Marks before mentioned; but by the singing, the Nightingals taken in *August* are most certainly and evidently apparent to be discerned. And as for those which are taken in *April*, your knowledge resteth in these several observations; First, When you have taken the Bird that you think you heard sing, call again, and if the Cock answers and sings again, then you have taken the Hen and not the Cock; but if you find the Cock not to sing, then be assured you have the Male; for if you take the Hen at first, and he missing of his Hen will sing extraordinarily, also in lower parts of the Sex which the Cocks put forth, which the Hens do not; but if you take a Bird about the middle of *May*, or beginning of *June*, you may perceive the Hen very apparently from the Cock, by reason all the Breast of the Hen will be bare with Sitting, and all full of

scurf, when the Cocks Breast is all well-feathered, without any bareness or scurf: These therefore are the most certain Rules and Observations that ever I could find in all my Experience, whereunto you may trust and betake your self.

How to make the PASTE which the Nightingals eat, being likewise good for the Wren, Robin-Red Breast, Wood-Lark, Skie-Lark, Black-Bird, and Thrushes, and many other Birds.

TO make this Paste for several sorts of Birds; which before in several Chapters we have mentioned, Take half a peck of your finest Horse-beans being very dry, and let them be ground very fine, and boulded diligently through a very fine Boulter, as is used for Wheaten-Meal; do so much in quantity as may be convenient for your turn, or according to your stock of Birds you keep. For example; Let your quantity of Meal be two pound, with one pound of the best Sweet-Almonds blanched; which afterwards must be very well beat in a Morter, rather finer than those Almonds that are beat for March panes; then take four ounces of fresh Butter, I mean without any salt, which Butter you must put in a Copper-Pan well tinned, and mix them very well together, the said Flower, and Almonds and Butter; when you have done this, set the Pan upon a Charcole-fire, that it may not smell of Smoke, continually stirring of it whilst it stands upon the Fire with a Wooden Spoon, that so it may boil by degrees, and not burn to; then take four Yolks of Eggs, and a little Saffron; when you perceive the Butter to be all melted, then having
some

some live Virgins-Hony, drop in so much by degrees continually stirring of it, that it may incorporate all the things in one, if you do not keep it continually stirring, it will be very subject to burn to : When you have so done, you shall take a Cullender made with such Holes as will let pass all that is small and lies not in knobs ; then take the remainder of the Paste and beat it in a Morter again ; if you find it will not pass through the Holes of the Cullender, then set it upon the fire again and boil it gently ; then try again to force it through the Cullender, till it come in such quantity and quality as is requisite for the necessity of what store of birds you do intend to keep : if there remains still some of the Paste which would not pass through the Holes of the Cullender, set it upon the fire to boil very well, and make a further essay to force it all through, so far forth as it may all be brought to a just consistency : And for the keeping of it, you must pour Hony above ; let your Hony be melted first, and a little clarified, and so you have store of Provision for many Months ; this Paste may be mixed with your Sheeps-Heart, or with your Wood-Larks Meat, or any other birds meat whatsoever, for it is a brave strengthening, cleansing Diet, for all sorts of soft-beaked birds. This is the only Meat that is used in *Italy*, by all the Country-People for the preserving of Nightingals, and is made by the Apothecaries, and sold out by the pennyworth, as frequently as Mithridate or Diascordium is here : This is ready at all times, when once made, and will continue seven or eight months.

The several sorts of Diseases the Nightingal is subject to, and how to relieve them.

THE Nightingal, as I have before observed, about the latter end of *August*, grows extraordinary fat, both abroad in the Fields, and also in Houses where they are caged up, which most do look upon to be very dangerous when it begins to abate if they do not sing; but to help this, They must be kept very warm upon the falling of their fat, and also given some Saffron in their Meat or Water; but when they are perceived to grow fat, they must be purged two or three times a week with some Worms that are taken out of a Pigeon-House, for the space of four or five weeks together, and also you shall find very frequent about the beginning of *August* about your Vines or Currans, or Goose-berry Bushes, a sort of speckled Spider, (which is to be found at no time of the year else) they are very plentiful; so you may give them two or three in a day as long as they last, for this will purge and cleanse them extraordinary: if they grow melancholly, put into their Water or Drinking-Pot some White Sugar-Candy, with a slice or two of Liquorish; and if this doth not help them, but they still complain, put into their Water-Pot six or eight chives of Saffron, or thereabout, continuing withal to give them the Paste and Sheeps-Heart shred very fine, and also give them three or four Meal-Worms a day, and a few Ants and their Eggs; and also boil a new laid Egg very hard, and chop it small and strew it amongst the Ants and their Eggs, for I have had them, when very fat; to fast seven-
teen

teen or eighteen days together, but it is far better when they eat. Nightingals that have been kept two or three years in a Cage, are very subject to the Gout; now when you shall perceive it, take them out of their Cage and anoint their Feet with fresh Butter or Capons-Grease; do so three or four days together, and it is a certain Cure for them. I had almost forgot the principal thing that causes the most of Diseases in your Nightingal; which is this, That for want of keeping them clean and neat they clog their feet, which causes several to have their Claws to rot off, and it brings the Cramp and Gout, and makes them never thrive nor delight in themselves; therefore be sure to let them have twice a week Gravel at the bottom of the Cage, and let it be very dry when you put it in, for then it will not be subject to clog, for I look upon a Bird as good as dead, when they are continually clogged; for if they be in heart, they will pick and clean their Feet, and prune their Feathers; no Bird can be kept too clean nor too neat, for that causes them to take delight in themselves. The next thing the Nightingal is subject to, Is Apostems, and breaking out about their Eyes and Neb, for which you shall likewise use your fresh Butter or Capons-Grease. I shall now shew you a great secret to raise Nightingals that are very bare, When you see an absolute necessity for it, give them new Figs chopped very small amongst their Sheeps-Heart and Paste, or hard Eggs, and when they are recovered, bring them again to their ordinary Diet, that may continue to maintain them in their former plight, for as soon as ever you perceive they are growing fat, give them no more Figs. There also happeneth unto the

Nightingal another Disease, called the Straitness or strangling of the Breast, which comes very often for want of care in making of their Meat, by mincing fat Meat therewith ; and you may perceive it by the beating pain not afore accustomed, which he abideth in this place ; and also by this, when he is given very often to gape, and opening his Bill. This Disease also happeneth, by reason of some Sinew or Thread of the Sheeps-Heart (for want of well shredding with a sharp Knife) to hang in his Throat, or many times it will clasp about his Tongue, which causeth him to forsake his Meat, and grow very poor in a short time, especially if it be in the Spring-time, or when he is in Song : Now as soon as you shall perceive him to gape, or shaking open his Bill, take him gently out of his Cage, and open his Bill with a Quill or Pin, and unloosen any string or loose piece of Flesh that may hang about his Tongue or Throat ; I have seen very many that have been killed with some of the Sinew or loose Flesh hanging about the Tongue and Throat ; after you have taken it away, give him some white Sugar-Candy in his Water, or else dissolve it and moisten his Meat, which is a present remedy to cure any thing that is amiss ; for in brief I must tell you, All Birds that eat Sheeps-Heart, or other Heart, if the Keeper and Maker be not careful to mince it very fine, are very subject to be troubled with the Disease afore mentioned, and are seldom good afterwards.

*Now I shall give you a breif Observation of
what Birds are like to prove best.*

THose Nightingals that inhabit by High-Ways and Orchards, and sing close by Houses, and are us'd to the company of People, are far beyond those that are bred in Copices and more remote places; for I have many times observed, That Birds taken where People have much frequented, will feed much sooner, and sing also, and come to be familiar in a short time, when others that are taken farther off, are long before they come to feed, and for the most part are very subject to fright, and upon the least dislike will give off singing; for when you have taken any Bird, and find him stubborn and not take his Meat kindly, and beat himself against the Cage, set him flying again, for he will never prove worth keeping. Be careful not to untie the Wing of your Nightingal till they are very tame and familiar, for if you do, when they find themselves free, they will fall immediately a beating themselves, so you must be forced to new-tie, or else your Bird will quickly beat himself to death, or if not, he will make himself incapable of singing that year.

Now concerning the Wood-Lark.

THIS Bird very many hold not much inferior in Song to the Nightingal; nay, a great many do prefer him before it; but it is of this Bird as of all other, some are far excellenter than others, both in length and sweetness of Song; I have known
some

some Wood-Larks to have a great part of the Nightingal, for that being bred by Coppice sides, and other places where the Nightingals haunts may be. Now this Bird is a very tender Bird, and yet he breeds the soonest of any Bird we have in *England*, I had a Nest of young Birds ready to fly by the 16th of *March*. This Bird is a very hot mettlesome Creature, for if they be not taken in *January*, or the beginning of *February*, they grow so extraordinary rank, that in a short time they pine away, by reason of the rankness of the Stones, which we find extraordinary swelled when dead. This Bird delights mightily upon gravelly Grounds and Hills that lie to the rising of the Sun, and in Oat Stubbs; This Bird is coupled with his Mate at the beginning of *February*, (and then they part with all their last Years brood) and immediately go to Nest: they build most commonly in your Laiers Grounds, where the Grass hath been pretty rank, and is grown Russet; they build with some Bennet-Grass, or some of the dead Grass of the Field, and make it always under some large Tuffet to shelter them from the Wind and Weather, which commonly at that time of the Year is very cold; they feed their Young with a small kind of Worm; I have taken several of their Nests, with a resolution to bring them up, (we not understanding the way of taking them by Net in the Country, as they do here about *London*) but could never do it, (though I have brought up all sorts of other Birds) for this reason, They either had the Cramp, or else turn'd into a Scouring, in less than a weeks time after I had taken them from the old Ones; several that have been perhaps dilligenter than I, have brought them up to feed, but I could

could never hear of any that kept them so long till they sung, and made them the least part of amends for their trouble and charge they had been at. This Bird hath a most curious melodious pleasant Song, carrying of it through with so much sweetness and curiosity, and abundance of variety, that I have had very many that have had almost thirty several sorts of Notes; which if they sing lavish, is a most ravishing Melody, and especially when the Nightingale and they sing both together, each one striving to outvie the other; for I have seen a hot-mettled Wood-Lark to strain his Note so much, that he hath dropt down dead off from the Pearch, in striving to exceed his Antagonist: These Birds are, as I told you before, never bred from the Nest, as I could ever understand. They are taken at three months of the year, in *June*, *July* and *August*, which we term young Branchers, having not moulted their Nestling-Feathers; I shall shew you here after that, how at this time of the year you may take them, with a Hawk called a Hobby. The next season of taking, is the general flight-time, which is the latter end of *September*, for then they rove from one Country to another, and then the Branchers are all moulted off, and then you can hardly distinguish an Old Bird from a Young one; at this time of the Year they take them in great quantities, compared with other times. The next Season is the beginning of *January*, till the latter end of *February*, at which time they are all coupled and returned to their Laires or Breeding-places: The Birds that are taken in *June*, *July*, and at the beginning of *August*, are commonly taken with a Hobby adoring; which is this, Get out in a dewy morning,

morning, and go to the side of some Hills, which lie to the rising of the Sun, where they most usually frequent; and having sprung them, observe where they fall, then surround them two or three times with your Hawk upon your Fist, making of him hover when you come indifferent near, and they will lie till you clap a little Net upon them, that you carry upon the end of a Stick; or else if three or four of you go together, take a Net made after the manner of them used for Partridges, when you go with a Setting-Dog only, the Meash must be smaller; let it be a Lark-Meash, and then your Hawk to the Lark is like a Setting Dog to Partridges, so with such a Net you may take all the whole Company at one draught: In like manner you may take your Sky-Larks, but they seldom are above two together; but your Wood-Larks keep company with their young ones till flight-time, and then they part.

How to know which are best, the Bird taken in June, July, or August; or at flight time; or in January or February,

THE Birds taken in June, July or August sing presently, but last but a little time in Song, for they immediately fall to Moulting; which if they withstand, commonly prove very sweet Song-Birds, but not so lavish as those that are taken in Spring; they are commonly very familiar Birds, by reason they are taken young; the birds that are taken at flight, are brave strong handsome sprightly strait birds, and do prove well at Spring, if they be well kept all Winter; if not, they will be lousie and

and come to nothing, as I shall shew you hereafter; when I come to the order and feeding of the Bird; these usually do not sing till after *Christmas*. Those that are taken in *January* and *February*, sing within two or three days, or a week at farthest (if they be good-conditioned Birds, and will soon become tame; but your fearful wild buckish Birds seldom prove good, for upon every turn they bolt against the Wires of the Cage and bruise themselves, and so are apt to leave off singing; therefore if you have a Bird that is a good Bird and wild, have a Net knit French Meash, and so put it in the inside of the Cage, sowing of it close to the sides, and strait: that when he boult or flirts up he may take no harm. I do hold the Birds taken in *January* and *February* for the most part do prove the best, by reason they are taken in full Stomach, and sing in a very short time after, and are more perfect in their Song than those taken at other Seasons; and the only way to preserve him, and help him of these Distempers, is first to give him fresh Gravel twice or thrice a week, and let it be sifted fine, otherwise he will bruise his Feathers basking in the Sand if you leave gravelly Stones. Secondly, Be sure to let him have such Meat that is not too stale, for if it be mouldy and dry, the vertue is almost gone out; so he shall never thrive upon it. Thirdly, Have a great care to shift his Water three times a week, for it stinks sooner than any Birds water; and the reason is, That the Bird by throwing about his Meat, some falls into the Water, which causes it immediately to stink, and then it is not at all healthful for him to drink of it; if the Bird be very poor, you must, at the beginning of Spring, give him every two

two or three days, a Turf of Three-leaved Grass, as is used to the Sky-Lark, and boyl him a Sheeps-Heart, and mince it small, and mingle it amongst his Bread, and Egg, and Hemp-seed, which will cause him to thrive extraordinarily. To kill his Lice, Take him out of the Cage (if it be not a very good Bird it is not worth while) and smoak his Feathers with some Tobacco, and give him fresh Gravel, and set him in a hot place where the Sun shines, and he will immediately rid himself of the Vermin, if he hath strength to busk in the Sand; for the Truth is, These Diseases almost happen through keeping of them nasty, and not giving of them good Diet: If you would have your Bird sing very lavish, feed him all his time of Song with some Sheeps-Heart mixed with his Egg, and Bread, and Hemp-Seed; and put in his Water two or three slices of Liquorish, and a little white Sugar-Candy, with two or three Blades of Saffron; do so once in a week, and it will cause him to be long-winded, and extraordinary lavish in his Song, carrying it out also at a far greater length then at other times; and I hold some Wood-Larks not to be inferior to the Nightingal; but the bad keeping, and ill-ordering makes them sing so dully as if they were asleep, which otherwise he is a very chearful Bird; for observe them when they sing in the Fields, with what ravishing melodious Songs they charm your ears, which if well-ordered, would prove the same being kept in a Cage.

Of the Wood-Lark and Nightingal.

I Shall tell you a small Story, I and another Gentleman riding in the Country in an evening hard by a Coppice or Wood-side, heard a Nightingal sing so sweetly, as to my thinking, I never heard the like in all my life, although I have heard a hundred in my time ; for the place being in a Valley, and the Coppice on the side of it, made all the Notes of the Nightingal seem double with the Echo ; we had not stay'd long, but comes a Wood-Lark and lights upon a dead Twig of an Oak, and there they sang, each out-vying the other ; in a short space more, about an hundred paces off, lights another Wood-Lark, distant from the first, and under him, as near as we could judg, was another Nightingal ; these four Birds sang with so melodious Harmony, warbling out their pleasant Notes for above a whole hour, that never any Musick came in competition with it, to the pleasing of our Ears ; as soon as the Wood-larks were gone, the Nightingals, we supposed went a little to refresh Nature, having play'd their parts so well, that every Bird in the highest degree strove for mastery, each striving to out-vie the other. My Friend and I having stood a full hour to hear these Songsters charming our Ears, at our going, I perswaded him to sing a merry Catch under the Wood-side, which he had no sooner began, but one of the Nightingals came and bore his Part, and in a minutes time came the other to bear his Part, still keeping of their stations, and my Friend and I standing between them, (for it is observed by all that know the nature of the Night-

Nightingal, that he will suffer no Competitor, if he be able to master him, (if not, they will sometimes rather die than give place) and so he sang three or four merry Songs, and the birds singing with him all the time, and as he raised his Notes so did they, that he did protest, He never enjoyed more pleasure in so short a time in all his life, for the Coppice or Wood being upon the side of a Hill, and a Valley in the bottom, so doubled all their Notes, with such a sweet and pleasant Eccho, that I am confident none could think the time long in the hearing so sweet and delightful pleasant Harmony.

The next Song-Bird as I esteemed best, is the Skie-Lark; his place of Breeding and Feeding.

IT is a Bird that is very common in all parts of England, so is not so much regarded and taken notice of; but I do esteem some of them to be very fine pleasant Song-Birds, for in all birds of the same kind, there is as much difference as between skim'd Milk-Cheese and Cream, both being Cheese; so that in the Lark, both Skie-Lark, the one not worth 3 d. and the other worth 40 s. This bird is a very hardy bird, living almost upon any Food, if he hath but a green Turff of Three-Leav'd Grass once in a Week. This bird is much later than the Wood-Lark by almost two months, for he seldom hath young Ones until the middle of May, when the Wood-Lark hath in March. This bird, though in Winter we see great flocks, almost in every Country throughout England, yet we find the fewest of their Nests of any birds I know that are so plentiful; they most commonly build in

your

your Corn or thick high Grass Meadows, and have usually three or four in a Nest, to my knowledg, I never found five in all my life-time ; they may be taken at a fortnight old, and will be brought up almost with any Meat ; but if you give them at first Sheeps-Heart and Egg chopped together, till they are about three weeks old, or till they come to feed themselves it will not be amiss ; and when they come to eat alone, give them Oat-Meal, Hemp-Seed, and bread, mixed together with a little Egg, bruise the Hemp-Seed, and they will eat the better : at first, be sure to chuse Hemp-Seed that hath a good Kernel and sweet, otherwise you will but deceive your self and the Bird too : These Birds that are so young, may be brought up to any thing, as I shall shew you when I come to treat, one bird learning another birds Song ; you must always observe to give these birds Sand at the bottom of the cage, and let them have a new Turff every week ; these Larks must have no Pearches in their cages as the Wood-Larks had, for these are Field-Larks :

How to order a Wood-Lark when taken.

IN the first place you must have a cage with two Pans, one for mix'd Meat, and another for Oat-Meal and whole Hemp-Seed. First, boyl an Egg hard, then take the crum of a half-penny VWhite-Loaf, and as much Hemp-Seed as the bread ; chop your Egg very small, and crumble your bread and it together ; then bruise your Hemp-Seed very small with a Rolling-pin, or pound it in a Morter ; then mingle all together and give it him. You must have fine red Gravel at the bottom of your Cage,

and shift it every week at farthest, otherwise he will be subject to clog his Feet with his Dung, and will not take half that delight in himself, for he delights to bask himself in Sand; which I find, if he hath not pretty often he proves lousie, and then seldom or never comes to any thing, for they neither are handsome to the Eye, nor give any melody to the Ear, therefore be sure to keep them clean and neat, and they will answer your expectation; you must line your Peach in the Cage with some green Bays, or else make a Peach of a Mat, which I have found them so very much delight in. If you find him very wild when he is taken, keep him three or four days from Company till he begins to eat his Meat; strew some of the Hemp-Seed and Oat-Meal upon the Sand, and some of his mixed Meat also, for sometimes they do not find the Pan till they be almost famished, and then seldom are recovered to their former strength.

How to know a Cock from a Hen.

I May say of these Birds as of the Nightingal, That several have pretended to distinguish the Male from the Female by several Marks, one by the smallness of his Head, and another by the lightest colour, and another by the streightness of his going, and some by the White of each side of his Head, and others by the largeness of the Bird, and some by the Pinion of his Wing; all these I have found to be deceitful and fraudulent, which is very great perplexity, if we keep Hens instead of Cocks. Now the truest way that ever I could find to be certain at all times, is first the largeness and length of his Call.

Secondly, The tall walking of the Bird about the Cage. And thirdly, At Evenings the double of his Note, which we call Cudling, as if they were going to Roost; but if you hear him sing strong, you cannot be deceived, for Hens will sing a little; this is chiefly to know those Birds that are taken at flight-time, for I hold it not worth ones time and trouble to keep them round the year, without it be an extraordinary choice Bird; for if a Bird sings not that is taken in *January* and *February*, within one month after, you may conclude him not worth keeping, or else for certain it is a Hen. But our chief aim is, to know those Birds that are taken at the latter end of *September*, for many of them prove excellent Birds, and will begin to sing after *Christmas*, and hold on until the latter end of *July*.

*Concerning the Diseases of the Wood-Lark,
and his Cure.*

THIS Bird is of a curious Song, and a tender Bird to be kept if not rightly ordered; but if well ordered, I have known him been kept six or seven years, with great pleasure to the Keeper, having been better and better every year that he hath been kept, and at last hath sung such varieties of Notes, even to admiration of understanding Ears, that are able to judg between the goodness in Song in one Bird and another. These birds are very subject to the Cramp. giddiness in the Head, and to be very lousie. Many People admire how they can be cold in a House, when others that are abroad suffer much more, and are never subject to the Cramp; the reason is this, That abroad they have

variety of Motion, as flying and running, which in a Cage they have not ; but being confined to a narrow compass, have very little or no motion at all, which if the Cage be not often shifted with Gravel, the Dung clogs to their Feet; and makes them numb, which causes the Cramp; and another thing causes it also, When they hang them out abroad and it rains, and so clogs and wets the Sand, that they sitting all Night upon it, very often causes it so ; if you hang them out, and the Sun shine not to dry it, they ought to have fresh Sand to be given them, and the Pearch lined that they may take a delight to sit upon it, keeps them very neat, and are not subject to clog, and sings with far more pleasure, then when he lies at the bottom of the Cage, and is not seen sitting upon the Pearch, also causes their Song to seem more lavish, for the bottom of the Cage takes off the life of the Song. Next is the giddiness of the Head, which is occasioned by feeding upon much Hemp-Seed ; which when at first you perceive, give him of your Gentles that you fish withal, if you can get them ; if not, give him some Hog-Lice, or some Emets and their Eggs, and put in his Water three or four slices of Licorish, and it will immediately help him. The third Disease is Loufiness and Scurf, which causes a poorness of the Bird.

How to take the Old Skie-Lark several ways, and the way of ordering when taken.

I Shewed you when I treated of the Wood-Lark, how he was taken with a Hobby and Nets, by which this Lark may be taken also, which is not need-

needful to repeat again ; but we have some more ways for taking of this Skie-Lark, as I shall direct you according to my best ability. This Lark is taken in dark nights with a Net called a Trammel, it is a Net of 36 yards long, and six yards over, run through with six ribs of Pack-thread ; which Ribs are at the ends put upon two Poles 16 foot long, made taper at each end, and so is carried between two Men half a yard from the Ground, every six steps touching the Ground to cause the birds to fly up, otherwise you may carry the Net over them without disturbing of them ; so when you hear them fly against the Net, clap the Net down and they are safe under it : All in the *Vale* there is hardly a Farmer without one of the Nets ; this is a very murdering Net, taking all sorts of birds that it comes near, as Partridges, Quales, VVood-Cocks, Snipes, Felfares, and what not, almost in every dark Night ; I know them that have taken 20 dozen of Larks in a Night, The next way is taking of them with a pair of Day-nets, and a Glass, which indeed is very fine sport in a clear frosty Morning ; these Nets are commonly seven foot deep, and fifteen foot long, knat with your French Mease, and very fine Thread : I think it not convenient to describe them, being I would not seem to be tedious, you can hardly ever set them right, except you be at first shewed by an Artift at it : These Netstake all sorts of small birds that come within the compass of the Nets, as Linnets in abundance, and your Bunting-Lark, which hath a short sort of bill like to a Bull-Finch. The next way of taking these birds, is by a bell named a Loo-bell, with a great Light carried in a Tub ; this is a plea-

fant Sport by reason of its Light ; but this Bell is carried by one Man, and the Tub and Candle also, and the Net by another : This Bell and the Light so amazeth them, that they lie for dead ; they toss a little Net over them. They take all sorts of Fowls and birds with this bell, as Partridg, Pheasant, (and if a very deep bell, Duck, Mallard, Wood-Cock and Snipe) ; This way of birding hath a great conveniency before the Trammel-Net, for with this bell they go amongst bushes, and by Rivers, and shaw-fides, where commonly your Snipes and Wood-Cocks lie ; it is a sure way for taking a Covey of Partridges. The last way of taking your Lark, is in a great Snow ; You must take of Pack-thread 100 or 200 yards, and at every six inches fasten a noose made with Horse-Hair, (two Hairs twisted together is sufficient) the more Line the better, for it will reach the greater length, and consequently have the more Sport ; at every twenty yards you must have a little stick to thrust into the Ground, and so go on till it be all set, (I know them that have a thousand yards) ; then amongst the Nooses scatter some white Oats from one end to the other, and you will find the Larks flock extraordinary ; and when three or four are taken (for you will have them by the Neck, Leg, or very Claw) see and take them out, for else they may make the others shie ; and when you are at one end, they will be at the other end a feeding, so you need not fear scaring of them away, for it makes them more eager at their Food ; if it be after *Chrismas*, before the Snow fall, those birds seldom or never prove good for singing ; but take them that you intend to keep for singing in *Octob.* or *Nov.* and then they

they will sing a little after Christmas; chuse out the streightest, largest, and loftiest bird, and he that hath most white in his Tail, for these are the usual Marks for a Cock: You must provide him a Cage as large as two of the Wood-Lark Cages, and let there be a Dish in the middle of the Cage, or at one end, according to your fancy, and put always some Water in when you place the Turf in it, for the Water causeth the Turf to grow in the Cage; if you find him very wild and buckish, tie his Wings for two or three weeks, till he is become both acquainted and tame also; then when you perceive him pretty orderly, untie his Wings, still letting him hang in the same place he did. You must feed this old bird with Hemp-Seed, bread, and a few white Oats, for he takes great delight to husk the Oats; and when he begins to sing, once in a week you may give him a hard Egg, or shred him a little boiled Mutton, or Veal, or Sheeps-Heart. You must observe in this bird, as in all others, That you give no Salt Meat, nor no bread that is any thing Salt.

Concerning the Throstle, and the several kinds.

There be five sorts or kinds of Throstles, according as I have observed. The first sort, and largest of them, is your Mistle-Throstle, which is far bigger and larger than of the other sorts, and his Food is far different from all the other kinds, and very few to be seen; he is the beautifullest bird of all the five, but sings the least, except he always breeds near where store of Mistletoe is, and if he can possible, in a very thick place, or in some

Pit, for he is a very melancholy sort of Bird ; he makes as large a Nest as a Jay, and lays as big an Egg ; He builds commonly with rotten Twigs the out-side of his Nest, and the in-side is dead Grass, Hey, or Moss that he pulls from Trees, (this Bird delights mightily in old Orchards, where commonly is much Feed upon the Apple-Trees) she seldom lays above five Eggs, but four most commonly, she breeds but twice a year, and hath three young ones, never above four as I could find ; she feeds all her young ones with the Berries of the Mistletoe, and nothing else as ever I could perceive, having diligently watched them two or three hours together.

Many VVriters are of opinion, That this Bird is an excellent Remedy against Convulsions and Falling-Sickness ; for this reason, That the Mistletoe is so good (and he continually feeding upon nothing else) a Remedy against it, and is an approved excellent Medicine : The way of using it is, To kill him, and dry him to a Pouder, and take the quantity of a peny-weight every morning, in six spoonfuls of the distilled VVater of Mistletoe-Berries, or Black-Cherry water, fasting an hour after ; and they say one Bird taking will certainly effect the Cure ; I never did experiment the truth of it, but in my opinion it stands to a great deal of reason : It's no chargeable Medicine, only finding of a Nest, or shooting an old bird, and make tryal.

The young Birds taken about fourteen days old, are easie to be brought up, being a very hardy bird ; but I think it will not answer your expectation if you breed him for Song, for he hath a confused rambling Song, and not lavish neither ; the young

young ones are fed with Bread and Hemp-Seed, and a little Sheeps-Heart between whiles; it's a handsome bird for a voletic, and will breed like Pigeons if rightly ordered.

The next is your Felfare or Northern Throftle, which comes to us after *Michaelmas*, and tarries here all the winter, and departs the first of *March*; Their Feed with us is Hips and Haws in hard VWeather, and in open weather worms and young Grass, lying altogether upon Meadow or Pasture-Grounds; they come in very great numbers, and go away also in Flocks. They breed upon certain Rocks near the Sea-side, in *Scotland*, where they are in abundance, and have Young three or four times every year; I have taken them in great numbers at winter with your bird-Lime, as I have before directed you in the last Addition; I have for curiosity kept one in a Cage to see if they had any Song, but I found it not worth my labour, for when Spring came, he made nothing but a chattering, so that I found him far better for a Spit than a Cage, they being excellent Meat when they are very Fat, which is commonly in hard weather; in open weather they are very bitter, and not worth eating.

The next is your VVind-Throftle, which comes along with this Felfare or Northern-Throftle, but is much smaller, with a dark red under his wing; This bird breeds in VVoods and Shawes, as your Song-Throftles in *Scotland*, and hath an indifferent Song, far exceeding the two former: In *February*, in fine VVether, the Sun shining. they will get very many together upon a Tree, and sing two or three hours; some do fancy their Song, by reason
it

it is not harsh, but a pretty kind of sweet chattering Note like unto the Swallow, only a little louder. I think them not worth ones pains to keep them, for they will not sing above three months, and so give off.

The next is the Wood-Song Throfile, which is a very rare Song-bird ; first, For the great variety of his Notes ; and secondly, For the lavishness in his Song ; this, as in all other birds, one far exceeding another in Song, though birds of the same kind. Thirdly, He continues longer than any bird in Song, continuing at least nine months in a year. This bird is so well known to most Country-men, that it needs no Description ; He is very good for Man's Food, but I never could endure to kill them, by reason they are so fine Song-birds. The Hen makes her Nest in the beginning of *March* (which many times is both Frost and Snow, and very hard Weather) upon the stump of an old Tree, or side of the Coppice by a Ditch, according as she finds food and stuff most convenient for her building, and Food for her young ones. She maketh her Nest of Moss that grows upon old stumps of Trees that are in the Woods ; she fashions her Nest round and deep with Moss, and some dry Grass ; when she hath compleated the first part, she wonderfully, and after a most exact and cunning way, daubs the inside with a sort of Earth called your Loam, that the poor People in the Country Plaster their Walls with ; she doth it so smooth and even, and all with her Bill, that it goes beyond the Art of Man to perform with any Tools ; and the bird commonly leaves a Hole in the middle of the bottom of her Nest, which I suppose may be to this end, That it
may

may not be drowned upon any sudden violent Showers, or long continuance of Rain, which by this Hole at the bottom, she preserves both her Eggs and Young Ones from being killed and drowned, which if not so provided, might prove to the destruction of both: They breed commonly three times in a year, if they meet with no disturbance or casualties by the way; if the Weather be fine and warm, they go very soon to Nest; the first commonly is hatched in *April*, and now and then at the latter end of *March*, the second in *May*, and the third in *June*; but the first birds prove most usually the best and stoutest birds. The Throistle taken in the Nest, may be at fourteen days old, and must be kept pretty warm and neat, not suffering them to sit upon their Dung if it fall into the Nest, but so contrive it, that they may dung over the Nest whilst they are young and small; you must feed them with raw Meat, and some bread mixed and chopped together with some bruised Hemp-Seed, wet your bread and mix it with your Meat: When they begin to be well-feathered, put them in a large Cage, and put some dry Moss at the bottom and let them have two or three Pearches, that so they may sit or lie at their pleasure, for you must know that the Throistle, if not clean kept, is subject to the Cramp, and will neither sing nor take pleasure in himself: you may by degrees give him no Heart at all, for bread and Hemp-seed is as good Meat for him, as the best Sheeps-Heart and Egg is for a Nightingal: be sure to give him fresh Water twice in a week, that so he may bath himself and prune himself, otherwise he will not thrive; take that

that Nest where you find the old bird to sing well, for he always sings near the Nest.

The fifth is your Heath-Throistle, which is the smallest of three sorts that we have in *England*, you shall know him by his dark breast; some Countreyes call them Mevisses, for they differ in their Colour, Song, and way of breeding. This bird, in my Opinion, far exceeds that which we generally call the Song-Throistle, being far sweeter in his Notes than the other, and a neater bird in his Plume. The Hen builds by the Heath-side, either in a Frusbush, or by a Ditch-side in the stump of an old Haw-Thorn, and seldom haunts the Woods and Shaws as the other doth. This birds Nest is more difficult to be found than the other, and I believe ten Nests of the other for one of this. She builds with a long green Ground-Moss, and makes her Nest much deeper than the former and less, and begins not to breed till the middle of *April*, and breeds but twice in a year, and is a fine tame neat bird, and will sing nine months in the year, if well fed, and kept clean, both from Dung and Vermin. You must breed up these young ones after the same manner that the other was ordered in all things.

*How to know a Cock-Throistle from a Hen,
in Young and Old.*

THis is a very difficult bird to know, both when Young and Old ; I shall give you the opinion and Judgment of several others, and my own at last : The ancient Rule amongst Country-People, was, to chuse the top-Bird of the Nest, as they term it; that is the largest and most feathered stoutest Bird, which commonly lies uppermost, for they say it is the Nature of the Cock, from the very Nest, to get on top of the Hens Back. Another chuses him to be the Male bird that hath the fullest Eye, and most Speckles upon his Breast, and deeper down to his Belly. A third makes choice of a Cock, for the largeness of his Spots, and darkest, and a white Gullet, with two black streaks on each side. Another chuses him by the Pinion of his Wing, if it hath a very dark black that goes across it. Now at last I shall give you my own Judgment ; First, I take notice of his Gullet to be very white, with black Streaks on each side ; and then to have his Spots upon his Breast to be large and black, and the colour of his Head to be of a light shining brown, with black streaks under each Eye, and upon the Pinion of the Wing ; these are the Marks I most commonly chuse them by : But if you will be sure not to fail, observe my Counsel ; Bring up a whole Nest, and in a short time after they feed themselves, you will find them Record to themselves.

☞ Note, The Hens will Record as well as the Cocks, but it is with short catches and jerks, and not continues it long ; but the Cock is full, and you will

will perceive his Gullet to extend it self much more than the others, and to sing much oftner than the Hen ; when you have observed them two or three times, take him out of the Cage and mark him, and put him in again ; then observe again, and see if it be the same bird you marked, and observing this way you shall never fail ; but in the other sometimes you may, for every Country alters the Plumes of the birds, which must of necessity cause your Judgments and Marks to err.

*Of the King of Birds, or the little King
called the Robin Red-Breast.*

THE next, in my Opinion, for a Song-bird, is the little Robin Red-breast ; he singeth very sweetly, and I have heard many to esteem him little inferior to the Nightingal : I must tell you, That were he as hard to be had as the Nightingal, I do not know but that he might have as great an esteem as him ; but plenty of any bird, or of any thing else, makes them not set by nor valued, though never so good in its Kind. This bird is known to every little boy, by reason they are seen at Winter upon the Tops and Roofs of Houses, and upon all sorts of old Ruins, on that side most commonly that the Sun riseth and shineth in the Morning, or under some Covert, where the Cold and Wind may not pinch him, for he is but a tender bird, and hath most usually his Cage lined and made after the form of a Nightingal-Cage ; they breed very early in the Spring, and commonly three times in a Year, in April, May, and June : They make their Nest with a dry greenish Moss, and quilt it within with

a little Wood and Hair ; they seldom have above five young ones, and not under four : They build in some old Hay-House, or barn, or Reek of Hay or Corn ; and when they are about ten days old, you may take them from the old ones, and keep them in a little basket or box ; if you let them tarry too long in the Nest, they will be fullen, and so consequently much more trouble, and not so fit to be brought up under another bird, that whistled to ; you must feed them with Sheep-Heart and Egg minced small, in all points as you feed the Nightingals, and but a little at once, and pretty often, by reason of his bad digestion, for if you give him too much at a time, he is very apt to throw it up again, which is a sign that he is not long-lived. Be sure he lie warm, and especially in the Night : When you find them begin to be strong, you may Cage them, and let them have some Moss at the bottom of the Cage and stand warm ; put the Meat in a pan or box, both of the Sheeps-Heart and Egg, and the Paste that you were formerly directed to make ; and let him also have some of the Wood-Larks mixed Meat by them, for those I brought up with Sheeps-Heart and Egg, when they came to feed themselves, would rather eat the Paste and Wood-Larks Meat, than the Sheeps-Heart and Egg ; you may give him which you will, according to your conveniency ; every boy knows almost how to take a Robin with a Pit-Fall ; but with a Trap-Cage and a Meal-Worm you may take a dozen in a day : And if you hear one bird to excel another, take the bird you have most mind to, and Cage him, and he will sing in a short time, provided he be not an old bird. If you take a bird, and do not hear him

him sing, by this Mark you shall know whether he be a Cock or Hen; if a Cock, his Breast will be of a darker red, a greater matter than the Hen, and his red will go up farther upon the Head.

What Diseases are subject to the Robin red-Breast, and how to Cure them.

First, He is very subject to the Cramp, and giddiness of the Head, which makes him many times fall off the Peach upon his Back, and then is present death, without some help be speedily used for him. The best Remedy to prevent him from having the cramp, is, To keep him warm and clean in his Cage, that his Feet be not clogged, which many times do eat the Joints off his Feet, with the Dung being bound on so fast, that it makes his Feet and Nails to rot off, which takes off the Life and Spirit of the Bird; if you find him droop, and is sickish, give him three or four Meal-Worms and Spiders, and it will mightily refresh him: but for the giddiness in the Head, give him six or seven Ear-Wigs in a Week, and he shall never be troubled with it, which is very subject to your Robins above all other birds, except the Bull-finch: If you find he hath little appetite to eat, give him now and then six or seven Hog-Lice, which you may find in any piece of old rotten Wood: be sure he never wants Water that is fresh two or three times a week. And to make him chearful and long-winded, give him once in a week, in his Water, a blade or two of Saffron, and a slice of Licorish, which will advantage his Song or Whistling very much.

Concerning the Jenny-Wren.

[Hold the little Creature to be a curious fine Song-Bird, so not unworthy to be taken notice of amongst the little Birds of the Cage : He is of a fine chearful Nature, and singeth sweetly and delightfully, none exceeding him for the nature of the Song he sings ; he is a pretty speckled coloured bird, very pleasing to the sight, and when he sings, cocks up his Tayl, and throws out his Notes with such pleasure and chearfulness, that for his bigness none exceeds him. This Bird breeds twice a year, first, About the latter end of *April*, and makes her Nest with dry Moss and Leaves, and doth it so artificially, that it is a very hard matter to discover it, being it is amongst Shrubs or Hedges where Ivy grows very thick ; they will build in old Hovels and Barns ; but them are those that are not used to the Hedges ; they close their Nest round, leaving but one little Hole to go in and out at ; she lays a-bundance of Eggs, I have had eighteen out of one Nest, which would seem very strange, if it were not a thing so generally common ; I have had sixteen young ones out of a Nest : It's to admiration how so small a little-bodied Bird can cover so great a company of Eggs ; I am perswaded the Cock and Hen sits both together ; but when they have hatched, to feed so great a company and not to miss one Bird, and in the dark also, 'tis a very curious thing to consider. Their second time of breeding is in the middle of *June*, for by that time the other Nest will be brought up and shift for themselves, But if you intend to keep any of them, take them

out at twelve or fourteen days old from the Nest : You shall give them Sheeps-Heart and Egg minced very small, taking away the Fat and the Sinews, or else of Calves or Heifers-Heart. Observe in all Meat-Birds, to cleanse the Meat or Heart of all the Fat and Sinews ; and if it be Beef, let it be well beaten, and shred very small, because of digestion. You shall feed them in their Nest very often in a day, giving them one or two morsels at a time and no more, lest they should cast it up again, by receiving more than they can bear or digest, and so die : You must feed them with a little Stick, and take up the Meat at the end about the bigness of a white Pea ; when you perceive them to pick it from the Stick themselves, then put them into a Cage, and having a Pan or two, put some of the same Meat in it, and about the sides of the Cage also to entice her to eat ; notwithstanding you must feed them five or six times in a day for better security, lest they should neglect themselves and die, when all your trouble is almost past. After they have found the way to feed alone, give them by degrees of your Paste now and then, and if you perceive them to eat heartily, and like it very well, you may forbear giving them any more Heart, when you find they are accustomed to eat the Paste with delight. Furthermore, You must, once in two or three days, give them a Spider or two. If you have a desire he should learn to whistle Tunes, take the pains to teach him and he will answer your expectation, for it is a Bird that is easily taught. If they be fed only with Paste, they will live longer than if they have Sheeps-heart.

How to know the Cocks from the Hens.

WHen you have got a whole Nest, observe which are browneft birds, and those which are largest, and mark them : And to be sure that they are what you expect them to be, observe their Recording, for such of them that shall record to themselves in the Nest before they can feed themselves ; and observe if their Throats grow big as they Record, they are certainly Cocks, this is the surest way to know them : When they can feed themselves, both Hens and Cocks will Record.

Concerning the Tit-Lark.

THis bird is very much fancied amongst many Men for his whisking, turring, and chewing, singing most like the Canary-bird of any bird whatsoever ; but I have not so great a fancy for him, by reason he is so very short in his Song, and hath no variety with it. This bird is a Companion of the Nightingal, for he appears at that time of the year when the Nightingal comes, which is the beginning of *April*, and leaves us the third or fourth of *September* ; they are fed after the same manner as the Nightingal when they are first taken. There is no taking of the old Ones but with a Net, such as you take all other small birds ; you must cram him as you did the Nightingal, for he will not feed himself, by reason he always feeds upon live-Meat in the Field, so he is not acquainted with the Meat that we offer him ; but when he will feed of himself, he will eat your Wood-Larks Meat, or almost

any other Meat. This bird is much of the nature of the Nightingal, for he grows exceeding fat, even as the Nightingal doth a little before his going away, and so continues for some time ; but they will not fast as the Nightingal doth, but eats his Meat though he be never so fat.

This bird makes her Nest about the latter end of *April*, and hath young by the middle of *May* ; she always breeds in the Ground by some Pond-side, or Ditch-side, or in a Garden in high Grass ; she makes her Nest of dead-Grass, and a few small Roots, and commonly lays six Eggs, or five at least, and feeds her young ones with Caterpillars and Flies ; they are birds very easily brought up, being they are hardy and are not subject to Colds and Cramps as other birds are, but live long if preserved with care. If you breed this bird up young and cleanly, he is a very pretty tame singing-bird, and to a great many hath a very pleasing Song, according to the old Proverb, *Short and sweet.*

Concerning the Red-Start.

THIS bird is of a very dogged sullen temper, for I know the Nature of him, that when I have declared, you will judg the same by his effects ; for if taken old, and not out of the Nest, he is very hard to be tamed ; he will be so vexed sometimes, as is a wonderful thing, almost incredible, if I had not tryed it my self ; for being taken in a Cage, and ordered as we formerly directed you in the Nightingal, he hath been so dogged, that in ten days time he would never look towards the Meat, and when he fed himself, hath been a whole month without

without singing, nay, I have known them never sing at all, till they were brought to their accustomed place. This Bird is a fore runner of the Nightingal, and comes four or five days before we generally hear him, and is of a chearful temper, and hath a very pretty melodious kind of Whistling-Song. The Cock is very fair and beautifully coloured, and is exceeding pleasant to the Eye. She breeds three times in a year, the latter end of *April*, in *May*, and towards the latter end of *June*; this is their ordinary course without some-body spoil or touch their Eggs, and then they may come sooner or later. They build most usually in holes of hollow Trees, or under House-Eves, and make their Nest with all sorts of things, as dry Grass, small Roots of Herbs and Leaves, Horse-Hair and Wool, according as the place affords them. Of all Birds that I know, this is one of the thiest, for if we perceive you to mind her when she is Building, she will forsake it, and if you touch an Egg, she never comes to her Nest more; for you can very hardly go to it, but she will immediately spie you, and if she chance to have young ones, she will either starve them, or break their Necks, with throwing them out of the Nest; for I can speak it of my own knowledg, That I having found a Nest in a hole of a hollow Tree, took one out of the Nest to see how fledg'd they were, and immediately put it in again; and having occasion to come that way the next morning, I found them all dead under the Tree, which made me admire; but since I have tryed two or three more, and they are all of one nature for doggedness; but if you bring them up young, they alter their Nature and become very

tame and pleasant to their Keeper. You must take them out of the nest about ten days old, for if you let them be too long in the nest, they are apt to learn some of the old birds temper, and be very fullen. These birds are fed with Sheeps-Heart and Egg minced and chopped very small, and given at the end of a Stick, when they open their Mouths, about the quantity of three white Peas; for if you clog their Stomachs too much, they will presently cast their Meat, and in a short time dye. When you perceive him to eat off the Meat from the Stick, Cage them up, and put their Meat in a Pan, and about the sides of the Cage; not ceasing, though he feeds of himself, to give him three or four times a day a bit or two, for he will hardly eat his fill for the first three or four days he begins to feed alone; but when you have accustomed him to eat five or six days without feeding, give him some of the Nightingals Paste, and you will find him very much delighted in it: You may keep him in what Cage you please, only let him be warm in Winter, and he will sing in the night as well as in the day. There is few People know this bird when they see him: He is a very lovely bird to the Eye, and very pleasant to the Ear.

Concerning

Concerning the Hedg-Sparrow.

THis is a pretty Song-bird, and singeth very early in the Spring, though little taken notice of; he hath a very pleasant Song, with a great deal of variety; old or young become tame very quickly, and will sing in a short space after they are taken; if you take them in the latter end of *January*, or beginning of *February*: They feed upon Wood-Larks Meat, or any thing else you will give them. They build their Nests in a White-Thorn or private Hedg, and make it of dead Grass and fine Moss, and Leaves, with a little Wool: She lays an Egg much different from other birds, being of a very fine blew colour, and hath commonly five Eggs, and brings up her young ones with all sorts of Food she can get. This is a very tractable bird and will take any birds Song almost if taken young out of the Nest. This bird I verily believe would be taught to whistle and speak; but more of this when I come to speak of Whistling-birds in their order.

Concerning the Solitary-Sparrow.

THis bird is naturally given to Melancholy; he loveth solitary and by-places, and from thence at first came his name; they do much delight to live by old decayed and uninhabited places, as being far removed from the company of all sorts of birds. She is very jealous, both of her Eggs and young Ones; she maketh her Nest in Holes, and chiefly of old banks, or in the holes of old hollow Trees:

she builds with any Materials which lies next to her Habitation, and most nigh and convenient to her Nest ; for she is a very idle Bird, and now and then doth not lay together stuff enough to keep her young warm. She breeds three times a year, in *April, May, and June*, and hath her young at no certainty. If you will bring up any young, chuse out the fairest of the Nest, and biggest also, and let them be pretty well covered with feathers before you take them out, for they are not given to be sullen, without you let them alone so long till they are just ready to fly ; and if they will not open their Bills, take them and open them, and give them the quantity of two grey Peas at three or four times, and in a short time you will perceive them to eat of themselves ; you may put in their Pan or Trough some of the Sheeps-Heart or Egg as you feed the young ones withal ; notwithstanding they do feed themselves, put two or three pieces in their Mouths, until such time that you perceive them to eat enough to satisfy themselves. Cage them as soon as ever you perceive them to eat off from the stick, and put some fine dry Moss at the bottom of the Cage, keeping them as neat and as clean as possibly you can ; for if you do not, they will become lame, and die in a short time, wherefore observe these directions until they be moulted ; and then keep Sand at the bottom of the Cage in the Summer, and Moss or Hey all Winter, feeding them with Sheeps-Heart and Egg minced small, and now and then some Nightingals Paste ; and if you please, a little Wood-Larks Meat also.

Concerning the Black-Bird.

VERY many may wonder why I should preserve this Bird till last ; my reason is, because I value him the worst of all the singing birds I have treated of ; and as least is kept of Nightingals, which is the best Song-bird in the World, so I think this may be accounted the worst of those that are termed singing Birds, and more kept of them than any birds I know ; the Country-Man and Woman being melancholy without their brave golden-beaked Black-bird, for your Country-People value no bird in comparison of him, and all is for being loud and coarse in his Song, as they are clownish in their Speech and Conditions. This bird is known to every one, and is better to be eaten than kept, and is much sweeter to the Palat being dead and well-roasted, than to the Ear when they are living, for they are delicate Meat if very fat. She maketh her nest many times when the Woods are full of Snow, which happeneth very often in the beginning of *March*. She builds her nest upon old stumps of Trees, by Ditch-sides or in a thick Hedg, they are at no certainty like other birds ; She makes the out-sides of her nest with dry Grass and Moss, and little dry Sticks and Roots of Trees, and daubs all the inside of the nest with a kind of Clay-Earth, fashioning it so round, and forms it so handsome and smooth that Man cannot mend it ; they breed three or four times a year, according as they lose their Nest, for if their Nests be taken away they breed the sooner. The young Black-birds are brought up almost with any Meat whatsoever, they feed-

feeding of them with Curds and Bran, or brown-Bread, or skim'd Cheese in the Country; not feeding them as we do here, with good Sheeps-Heart, or hard Egg, and White-Bread and Milk. This Bird sings about three months in the year, or four at most, therefore I esteemed him not worth any thing for his Song; but if he be learned to whistle, he is of some value; but in my mind his Whistle is very coarse, though it be very loud; so he is fit only for a large Inn, and not for a Ladies Chamber; so this Bird brings up the rear of all your soft-beaked singing-birds that we have common in *England*. But in every Country there is variety, according to the nature of the place, which if I thought might be desired, I would give a description of most singing-birds in the World.

Now I have done with all the soft beaked Birds, I shall use my endeavour to give you an account of all the hard-beaked Birds which feed upon Seeds, and are most plentiful with us here in England; the first I shall begin withal is, the Bird called the Canary-bird, because the Original of that bird came from thence, (I hold this to be the best Song-bird); But now with industry they breed them very plentifully in Germany, and in Italy also; and they have bred some few here in England, though as yet not any thing to the purpose as they do in other countries. I shall in order, to my best understanding, give you what knowledg I have concerning him, and the best way to breed and preserve them when bred; with the true way of ordering the young ones.

Concerning the Canary-Bird.

THIS Bird we had formerly brought over from the *Canaries* and no-where else, and so is generally known by that name ; but of late years we have had abundance of their kind come out of *Germany*, so we call them by the name of the Country, *German-Birds* ; but I believe the first Original were brought from the *Canary Islands*. The birds brought from the *Canaries* are not so much in esteem with us as formerly, for the Birds brought out of *Germany* far excel them in handsomness and Songs, the *German-Birds* having very many fine Jerks and Notes of the Nightingals, which in its place I shall declare how they came to have. Many Country-People cannot distinguish a Canary from one of our common Green-Birds ; but if they would diligently observe how the passages of his Throat heaves when he is singing, they might quickly distinguish him from any other Bird, let him be of any manner of colour ; and besides, he is lustier by much, and hath a longer Tail. Note, Those *Canaries* that have the motion of turning their Heads backward, are seldom or never good. The Nature of the *Canary* is quite contrary to other Birds, for as others are subject to be fat they never are, (I mean the Cocks) for the great mettle of the Bird, and his lavish singing, will hardly suffer him to maintain flesh upon his back, much less fat.

*How to chuse a Canary-Bird, and to know when
he hath good Song*

IN the first place let him be a long Bird, standing streight, and not crouching, but spritely like unto a Sparrow-Hawk, standing with life and boldness, and not subject to be fearful ; I would advise all People that intend to buy your Canary-Island birds, or German-Canaries, so lately called, first to hear them sing, and then they shall be sure not to be cozened one way, to buy Hens for Cocks. And then also in the second place, they shall please their Ears, for one fancies a sweet Song-bird, and another a very lavish Bird if he be not sweet ; and all phantasie, I think, a long Song-bird, and you chuse what pleases you best, and I'll assure you one shilling is very ill-saved, to buy them as they run out of the Store-Cage, for if you have but one Hen in twelve, your shilling in a Bird is quickly lost, and ten to one but some of the Cocks too hath little or no Song to be taken notice of, therefore be advised to hear him in a single Cage, that you may be able to judg something of his Song before you part with your Mony. Now most are of Opinion, that your Canary that hath most variety of notes, and is the longest Song-bird, is the best ; but Mens Opinions vary as the Birds Songs.

First, Some approve of your Canary, that whisk and chew like unto your Tit-Lark, by reason it is a spritely Note.

A second is for a Canary that begins like unto a Skie-Lark, and so continues his Song much after the
rate

rate of his singing, having a long Note and sweet, but I think not much variety in it.

A third approves of the Canary that begins the Skie-Lark, and runs upon the Notes of the Nightingals Song; which I do think, if he doth it well, is one of the pleasantest birds in the World.

A fourth likes a bird that hath a loud lavish note, not at all respecting either variety or length, so he makes but a noise in his ears.

So some phansie the way of singing after the Tit-Lark, some after the Skie-Lark, and almost all after the Nightingal, and few or none after the way of the Chaff-Finch.

*How to know if your Canary-Bird be in health
or not when you buy him.*

WHen you take him out of the Store-cage, put him in another cage single, and let the cage be very clean, that so you may see his Dung; if he stands up boldly without crouching, and have no signs of shrinking in his Feathers, and his Eyes look chearful and not drousie, and that he is not subject to clap his Head under his Wing, these are good signs, and yet he may be an unhealthy bird still; but the greatest matter is, to observe his Dunning, if he bolts his Tail like a Nightingal after he hath duned, it is a great sign he is not in perfect health, though he may sing at present and look pretty brisk, assure your self it will not be long before he be sick. The next is, if he dung very thin like Water, with no thickening, he is not right. And last of all, if he dung with a slimy white, and no blackness in it, it is a dangerous sign that Death

is approaching, and he will not continue long with you. But when in perfect health, his Dung lies round and hard, with a fine white on the out-side, and dark within, and will quickly be dry ; and the larger the birds Dung is, I hold it the better, so it be long, round, and hard. A Seed-bird very seldom dungs too hard, except very young.

Concerning the ordering of Canary-Birds when they begin to build, or when they intend for breeding.

IN the first place, You must make a convenient Cage, or else prepare a Room that may be fit for such a business ; you must be sure to let it have an out-let towards the rising of the Sun, where you must have a piece of Wire, that they may have egress and regress at their pleasure : When you have prepared a convenient Room, then set up in the corners of it some brooms, either Heath or Frail, opening them in the middle ; if the Room be pretty high, you may set two or three brooms under one another ; but then you must set Partitions with boards over the top of every broom, otherwise they will dung upon one anothers Heads ; and also they will not suffer to see one another so near each others Nest, for the Cock or Hen will be apt to fly upon a Hen that is not matched to them, when they see them just under their Nest, which many times causes the spoiling of their Eggs and Young Ones. In the next place, you must cause something to be made so convenient, and of such a bigness, that may hold Meat for some considerable time, that you may not be disturbing of them continually, and a
conve-

convenient Vessel for Water also; let your place where you intend to put your Seeds, be so ordered, that it may hang out of the reach of the Mice, for they will destroy all the Canary-Seeds, and so consequently may starve your Canary-Birds. You must likewise prepare some stuff to build withal of several sorts of things, as Cotton-Wool, small dead Grass, your Elks-Hair, and your long sort of Moss that grows along upon the Ground by your Ditch-sides, or in the Woods; you must dry it before you put them together, then mingle them all, and put them up into a little Net like unto a Cabbage-Net, hanging of it so that they may with conveniency pull it out. You must set Pearches all about your Room, and if big enough, set a Tree in the middle of it, that so they may take the more pleasure. You must proportion your birds according to the bigness of your Room, rather let it be under-stocked than over, for they are birds that love their liberty.

What things are most needful when they begin to breed.

IN the first place, when yon perceive them begin to build and carry stuff, give them once a day, or in two days at least, a little Greens, and some Loaf-Sugar, for that will cause a slipperiness in the body, that so the Eggs may come forth without injuring the birds, for many times the bird dies in laying her first Egg, which is a great loss to the breeder several ways: As first, to the loss of his first breed; then next, to the unpairing of the Cock, to which you should put in another Hen, whether he will pair or no; so that Cock would be far better taken

taken out, than suffered to tarry in your breeding-place, especially if it be a small place ; but with pairs in a large place he cannot do that injury ; and it will be very hard to distinguish which Hens Cock that dyed, and as hard to take him in a large place, without doing more injury than the bird comes to ; therefore let him rest till the end of the year, when you draw them out to part them. If you have but two or three pair together, it will be the best way to take him out and match him with another Hen, and then put him in again : And also when you find that they have built their nests, you may take away the nets that have their breeding-stuff in them, for they will be subject to build upon their Eggs with new stuff, if they do not lay presently.

They do breed most usually three times in a year, begin in *April*, and breed *May* and *June*, and sometimes in *August*, which is not very usual neither here nor in *Germany*.

How they breed them in Germany.

I Shall shew you every thing exactly how they breed them in *Germany*, according to the best information that I have received of those that have seen them and bred them also. In the first place, prepare a large Room, and build it in the likeness of a Barn, being much longer than broad ; and at each end there is a square place, and several holes at each end to go into those square places ; in those Out-lets they plant several sorts of fine Trees, which grow pretty thick, (for they will take much delight both to sing and breed in them) ; and at the bottom
of

of the place they strew it with a fine sort of Sand, with which they strew seeds of Rape, Chick-weed, and Groundsel ; which the Old Bird doth eat both at time of laying, and also when they have young ones : they put in the House all sorts of stuff for the building of their Nests, they put Brooms up and down all the corners, one under another, and to the height of the place that is built for the purpose, and make partitions between every Nest, to make them breed the quieter, without disturbing one another ; and in the middle of the Room they will set a board edge-ways to darken the light of each side : for no Bird almost doth naturally love to have much light come to his Nest. They plant a Tree or two if the House be big enough, one at each end, with many perches also along each side of the House, and all along where they make their Nests ; and in the place that is the Air, it is also full of perches, they hang their stuff for building all up and down the House, that the rain cannot come at it, and strew some in the ground also ; they make places very convenient every one according to his fancy, and for their Water also, some having fine Fountains in those places, that are the out-lets for the Birds, to go at pleasure into the Air, in which the Birds take very much delight to wash and prune themselves, and it makes the Seeds to grow up that are thrown in upon the Sand.

How to order them when they have young ones.

THEY seldom take their Nests away to bring them up by hand, as we do here, but they let the old birds always bring them up ; and when
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they are pretty stout, and can crack hard Seeds, they have small places for the young to come to feed, and they give them of all sorts of Green-Seeds to feed upon, and have a kind of clap-door to take them: they say, if they do not soak Seeds for the Young ones, that very few will live, by reason the Hen is apt to forsake them, (and the Seeds being very hard, they pine away and die) and go to Nest again. This Man also did truly affirm, they never came to any perfection till they came to have Birds of their own breeding in their own Countrey, and then being seasoned to the Countrey they breed in abundance, furnishing all *Poland, Germany, and France*, and of late years *England*, where they vent as many as any place in the World.

*How to breed the Young ones that are taken
out of the Nest.*

THese Birds must not be left too long in the Nest, for if you do, they are very apt to grow fullen, and will not feed kindly: therefore take them out about 9 or 10 days old, and put them in a little Basket, and cover them over with a Net, else they will be very subject to jump out upon the first opening of the Basket; and if they fall to the ground they will be bruised, and in a short time consequently die. You must keep them very warm for the first week, for they will be very tender, subject to the Cramp, and not digest their Meat if they take cold.

When you take them from the Old *Canaries*, take them in the Evening; and if you can possibly let the old birds be out of sight, otherwise they will be very apt to take distast when they sit again, and have

have young ones ; and will be apt at every fright to forsake both their Young and Eggs. When you have taken them out and put them in a Basket covered at top : Make their Meat after this manner ; Take some of your largest Rape-Seeds, and soak them in water 24 hours or less, if the Water be a little warm, I think 12 hours will serve ; drain the Water from the Seeds, and put a third part of white bread to the Seeds, and a little Canary-Seed in flower, and so mix them all together ; then having a small stick, take up a little at the end, and give every bird some 2 or 3 times over ; give them but a little at first, and often, for if you over-charge their Stomachs at the first, they seldom thrive after it ; and also they will cast up their Meat, which is a sure sign they will not live long after it : Therefore take a great care at first to feed them by degrees, that so their Stomachs may be able to digest it ; for you must understand that the Old ones give them a little at a time, and the Meat they receive from them, is warmed in the Stomach before they give it them ; and then all the Rape is huld, which lies not so hard at the Stomach as those Seeds which have the skins on. Therefore much care must be used at the first, to preserve their Stomachs and keep them in health. You must not make the Meat too dry, for then they will be apt to be vent-burnt, by reason all the Seeds are hot ; for I have observed that the Old birds do constantly drink after they have eaten Seeds, and a little before they feed their Young ones ; and they commonly after feeding of them, sit a quarter of an Hour or more, to keep them warm, that the Meat may better nourish them ; therefore when you have fed them, cover them up

very warm, that their Meat may the better digest with them.

Diseases of the Canary-Bird.

THE Nature of the *Canary-Bird* is never to be fat, nor to maintain or keep her Flesh well, by reason of her great heat and lavishness in singing. She's subject to several Distempers, as Impostumes, which happen upon her Head, and these are of a yellow colour, and cause a great heaviness in the Head, and many times the Birds drop from their Perch and dye within a short time, if it be not cured at the first appearance. The best approved thing that I know of, is to make an Ointment of Fresh Butter and Capons-Grease melted together, and anoint the Top of the Birds Head for 2 or 3 days, and 'twill dissolve it, and cure him; but if you let him alone too long, then after you have anointed him 3 or 4 times, see whether it be soft upon his Head; if it be, open it gently, and let out the Matter which will be like unto the Yolk of an Egg, then anoint the place with some of the Ointment, and it will immediately cure him without any further trouble: If you do perceive the Impostume at any time to return, do as you are before directed; you must give him Figs, and in his Water let him have a slice or two of Liquorish, and some Sugar candy.

The Old Birds above three years old are called *Runts*, and those about two years old are called *E-riffes*, and those of the first year that the old ones bring up, are *Branches*: When they can crack hard seeds, and they call them that are new-flown and cannot feed themselves, *Pushers*; and those that are bred up by hand, *Nestlings*; which I do approve far

far better than any of the first, by reason of his tameness and familiarity with his Keeper, which is the chief pleasure of a bird : For if a bird be extraordinary, and not tame, but wild or buckish, there is no pleasure in feeding or hearing of him sing, being apt upon all occasions to bruise himself and to forsake his singing when most desired.

Concerning the Linnet

They make their Nests in black Thorns and white-Thorn bushes, and in Fur-bushes upon Heaths more than any-where else : They build their Nests with very small Roots, and other sort of stuff like unto Feathers, those that build in the Heaths ; Those that build in the Hedges, build with Moss the out-side of their Nest, and line it within according as the Place will afford : Some hot-metled birds will have young ones four times in a year, especially if they be taken from them before they fly out of their Nests. The hotter the bird is in mettle, the sooner he breeds in the Spring. You may take the Young ones out at four days old, if you intend they shall learn to whistle, or hear any other birds Song ; for then they being so young, have not the Old birds Song, and are more apt to take any thing, than if you suffer them to be in the Nest till they are almost quite fledged. You must be sure when you take them out so young, to keep them very warm, and to feed them but a little at a time. Your Meat must be soaked Rape-seeds, and then bruise them, and put full as much soaked white-bread as the Seeds : you must make fresh every day, for if it be sower, it immediately makes them scour, and not long after die. You must not

give them their Meat too dry, for if you do, it will make them vent-burned, and that's as bad as if they scoured. If you intend to whistle to them, do it when you feed them: For they will learn very much before they can crack hard Seeds; so hang them under any bird that you intend, the *Linnet* shall learn his Song. The *Linnet* is a very apt bird for any Tune or Song, if taken out of the Nest very young: I have known several that have learnt to speak; for there is nothing so hard, but labour and diligence will overcome. You may know the Cock *Linnet*s from the Hens by these two Marks; First, by the colour of the back of the birds; if it be of your dark-coloured *Linnet*s, the Cocks are much browner than the Hens on the back and Pinion of the Wing; and so of the White-thorn *Linnet*, the Hens being much lighter-coloured than the Cocks. But observe this, that a Hen *Linnet* of the dark-coloured Cock, is darker than the Cock of the light-coloured *Linnet*. But the surest way of all is, to know him by the White in his Wing.

This bird is likewise troubled sometimes with Melancholy, and then you will find the end of his Rump to be very much swelled, which you must prick with a Needle and let out all the Corruption, squeezing of it out very well with the Point of the Needle; then anoint him with the Ointment made of fresh butter and Capon-Grease, and feed him with some of these herbs for two or three days; your Lettice and beets-seeds, and the Leaves also, and you may also give him the Seeds of Mellons chopped in pieces, which he will eat very greedily; and when you find him mend, take the Mellon-Seeds away, and give him of his old dyet again;

put

Put into his Water two or three blades of Saffron and white Sugar-candy, for a week or more, till you perceive the bird to be wholly recovered. The next Disease that this bird is most troubled with, is a Scouring, which some are not so dangerous as others: The first sort of Scouring, which I count not very hurtful, is very thin and with a black or white Substance in the middle: this is not very dangerous, for I have known very many sing very strong and lavish, when they have had this Scouring in a very violent manner, and not been in the least hurtful. The next sort of Scouring is between a black and a white, but not so thin as the other, but is very clammy and sticking, which is never very good in a Bird; this is recovered by giving your Bird at the first some Mellon-Seed shred, and Lettice-Seeds and Beet-Seeds bruised, and so give him in his Water some Liquorish and white Sugar-candy, with a little flower of Oat-Meal in the water. You must be diligent at the first to observe him when he is sick, that so he may have a stomach to eat, for in two or three days his Stomach will be quite gone, and then it will be hard recovering of him again. The next and worst sort of Scouring of all the three, is the white clammy Scouring; which is very bad and mortal, if it be not well looked after at the first. This is occasioned by bad Seeds, and many times for want of Water, seeds that have taken any damage at Sea, or have been over-heated, or lain in the wet too long before they have been housed, is a very great occasion of this Distemper. If they be not taken at the first appearance, it immediately takes away his Stomach, and causeth him to droop & fall from his Meat immediately.

ately : Therefore observe this cure for him ; In the first place give him Flax-Seeds, taking away all his other Seeds ; then give him of your Plantain-Seed if it be green, otherwise it will do him no good ; if you cannot get Plantain-Seeds, give him some of the Leaves shred very small, and some Oat-Meal bruised with a few crums of Bread ; and in his Water give him some white Sugar-candy and Liquorish, with a blade or two of Saffron ; You must observe, if you can possible, the first beginning of this Distemper, otherwise when his Stomach is lost, all these Medicines signifie nothing.

How to know a Cock from a Hen.

THis Bird is a very good and melodious bird in his kind, those which are bred out of the Nest proving much better than the Wild ones. There be two sorts of *Linnetts*, your black-Thorn and white-Thorn *Linnet*, or your black-Maled or white-Maled Bird, one being of a brown Plume, and the other of a light Grey : most do account the blacked Male the hardier bird, and the hotter-metled bird also. But I am of opinion that they all take after the Old ones, let the old ones be high-metled birds, let them be Brown or Grey, the young birds take after them, which is thus : Take your young *Linnet* when the Wing-Feathers are grown, and stretch out his Wing, holding of his body fast with the other hand (otherwise I have known them upon a sudden jerk to break their Wings) and then observe the white upon the Feathers of the 4th, 5th, and 6th Feather, if it cast a glistning white, and the white goes close to the Quill ; this is a sure sign

sign of a Cock : Take a Hen and a Cock together, and you shall perceive it better. This is the certainest way not to be deceived, to keep a Hen instead of a Cock, for it is not so much the cost in keeping of the Bird, but our disappointment in the expectation, of having some pleasure after our trouble and care, especially to them that take delight to whistle to him Tunes.

The several Diseases that the Linnet is Subject to.

First, She is subject unto the Disease called the *Pthysick*, which may easily be perceived by seeing him pant, and to heave his Belly fast, and sit melancholy, with his Feathers standing big and staring, and by the Belly when it shews it self more puffed up than ordinary, full of reddish veins, and his breast very lean and sharp, and seeing him spill and cast his Seeds about the Cage, not caring to eat at all. This Disease comes to the *Linnet* many times for want of Water, and having your Charlack-Seeds mingled amongst your Rape-Seeds, and for want of giving him a little green meat at the Spring of the Year, when you perceive the bird to begin to be troubled with this Disease, first to cut the end of his Rump, and to give him some white Sugar-candy in his Water, with two or three slices of Liquorish ; for want of Sugar-candy, let him put in fine Sugar : And for his Meat you shall give him beets, Lettice, to feed upon, or some of the Herb called *Mercurie*, which is a very good Herb for this Distemper for any Seed-bird : you may likewise give her Mellon-Seeds chopped small, and at the

the bottom of the Cage put some fine Gravel with a little Powder-Sugar, and a little ground Oat-Meal ; you may put also some Loom, that the Country-People do daub their Walls withal instead of Morter and Sand, every one almost knows ; bruise this small, and it will bring him to a Stomach, if he be not too far gone and past cure. The *Linnet* is also subject unto the Streins or Convulsions of the Breast, wherefore being oppressed with this Disease, you shall feed him with Lettice-Seeds, Beet-Seeds, and Mellon-Seeds bruised ; and in his Water you shall dissolve some Sugar-Candy, and some of the Nightingal's Paste, with a little Liquorish, so much that the Water may have a taste of it, and so continue it for the space of four, or five days, now and then taking of it away, and giving her Plantain-Water : be sure to give her a Beet-Leaf, or Lettice-Leaf upon the day that you give her Plantain-Water. The *Linnet* is also subject unto a Hoarseness in his Voice, which many times comes through straining her Voice in singing, and many times she gets a Husk in her Throat, which is seldom helped to come so clear off at first : many times also if it be a strong-metled Bird, he will break something within him, that he will never come to sing again ; for the hoarseness which is very often taken in his Mouth, which is thus, to keep him very hot, and upon a sudden to open his Cage to the Air, which immediately strikes a cold to his Breast and Throat, and oftentimes kills him ; for if you have a bird in the Moul, you must not carry him to the Air, but keep him at a stay till he is moulted off, and then open him by degrees, that so he may not take cold, and give him after his

Moul.

Moult something to cleanse him; your beet-leaves and some Liquorish in his Water: There is no better Remedy in the World for a hoarseness, than to put into his Water some Liquorish, and a few Annise-seeds, and then set him in a warm place. The *Linnet* is also subject to a great Scouring, I gave you an account of several sorts of them in the foregoing Chapter, where I treated of the *Canary-bird*.

Concerning the Gold-Finch.

THE next to the *Linnet* of Seed-birds is the *Golden-Finch*, which is a very rare and curious coloured bird, and were they not so plenty, they would be of very great esteem amongst us here; but plenty of any thing makes it slighted, and not regarded. This Bird is taken in great plenty about Michaelmas time, and will very soon become tame; the beautifulness, with the pretty melodious Song that this Bird hath, causes very many to keep them: (They were formerly carried beyond Sea to several places for a very great Rarity.) These *Gold-Finches* differ very much in their Tunes, for some of them sing after one fashion, and some after another, which needed not further be proved but by them that have kept them, for it is in this bird as in all others variety, one Bird surpassing another, both in goodness, variety, and lavishness of Song: They breed commonly in your Apple-Trees and Plum-Trees; and to my knowledge I never saw a Nest in a quickset-Hedge. They make their Nest of Moss that grows upon Apple-Trees and Wool, and Quilt the inside with all sorts of Hair they find upon

upon the Ground : they breed three times in a year. You must take young ones with the Nest about ten days old, and they must be fed thus : Take some of your best Hemp-seed, and beat it in a Morter very fine, then sift it through a Sieve, and put as much white-bread as Hemp-Seed, and put also a little flower of Canary-Seeds to it ; so with a small stick or quill take up as much as the bigness of a white Pea, and give them three or four bits at a time: you must make it fresh every day, it is soon done when the Hemp-Seeds are bruised and sifted ; if it be sower it will immediately spoil their Stomachs, and cause them to cast up their Meat, and then it is ten to one if they live. You must be sure to keep these birds very warm till they can feed themselves, for they are very tender birds, you may almost bring them up to any thing being a very tame bird ; be sure that in feeding of this bird you make clean his bill and Mouth, and if any of the Meat fall upon his Feathers take it off, otherwise they will not thrive. This bird that eats Hemp-Seeds, shall take for a Purge the seeds of Mellons, Succory and Mercury, which is a principal Herb for the *Linnet*, but this bird you may give Lettice and Plantain, which are excellent Herbs for this bird to purge him ; and when they have no need of purging, you must give them two or three times a week a little Sugar or some Loom in their Meat, or at the bottom of their Cage ; to this end they may eat some to scour their Stomachs, which for want thereof is the great destruction of our birds that feed upon Seeds : For nothing can be more wholesome for them than Wall or Loom-Earth and some fine Sand, and a lump or knob or two of Sugar always
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in their Cage ; for all seeds have a great oyeliness in them, and if they have not something to dry up that Oyeliness in the Stomach, in length of time it souls their Stomachs, and puts them into a Flux, and nothing is worse than unsound and damaged seeds, which in a short time destroyes them.

Concerning the Chaff-Finch.

THIS Bird is a very plentiful bird, and of some is much admired for his song ; but I have no great fancy for him, by reason he seldom varies in his Song like unto other birds, and hath no pleasingness nor sweetness in his Song like unto the aforementioned birds. At flight time this bird is very plentifully caught, but their Nests are very scanty found, as of the *Gold-Finch* also. This bird breeds in hedges & trees of all sorts, and makes his Nest of Moss and Wool, or any thing almost that he can gather up where she breeds. They have young ones two or three times a year, but they are seldom bred up from the Nest, being no bird that is apt to take another birds song, nor to whistle ; so they let the Old one breed them up that they may have the true song. Your *Essex-Finches* are in all Mens Opinions accounted the best, both for length of song, and variety, she ending with several notes, which is very pretty : I do not know but this bird, if he were made tryal of, might not only take the notes of any other bird, but also may be brought up to whistle any Tune, as well as the *Canary* or *Linnet* ; and I am confident it is a hardier bird than either of them, by reason he will almost live upon any seeds, none coming amiss to him : he is very seldom subject
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to any Disease, like the *Canary-Bird* or *Linnet*: This Bird will be very Lousie, if he be not sprinkled with a little Wine two or three times a month.

Concerning the Green-Finch.

THis bird is of a very mean Song, and yet is kept by a great many people for his cheapness and hardiness, and by most people to ring the Bells, being a good-bodied heavy bird. This bird is plentiful in every Country, and breeds the silliest of any, making commonly his Nest by the High-way-side, where every boy finds them, and destroys them at first, till the Hedges are pretty well covered with green Leaves. They breed very early in the Spring before the Hedges have leaves upon them, which causes every one to see their Nests at first, so that seldom their first Nests come to any thing. They build with Moss that is green that grows at the bottom of Hedges, and quilt their Nest very forrily within; and many times they are so slight, that a great Wind shakes them to pieces, and drops both young ones and eggs. They breed three times in a year, and the Young is a very hardy bird to be brought up: You may feed them with some white-bread and Rape soaked; and he is a very apt bird to take the whistle, rather than another birds Song: All that can be said of him, he is a very dull bird, nor having the Spirit of a *Canary-Bird*, nor a *Linnet*; for he will never kill himself with singing or whistling. I have heard some have given great commendation of him, to learn to whistle as well as any bird whatsoever, and that he will not be subject to take any birds Song to put him out of his Notes.

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He is seldom subject to any Disease but to be too fat; and of Seed-birds there is none like him for growing so excessive fat, if you give him Hemp-seeds, then he is good for nothing but the spit, therefore give him no other but Rape-Seeds.

The way to know how many Diseases and Maladies all Singing-Birds are subject to.

First, the Diseases are divers according to every Birds Food, and this diversity causeth divers effects and divers signs, which being hid, the Disease to our outward apprehension is unknown, and so there is no administering of any thing, in as much as it is not known from whence is the true Ground and Original of the Disease; so that no Medicine or Remedy can with any certainty be made convenient for true Cure of the Distemper: wherefore it is very necessary that there should be had a good regard and inspection unto the outward Signs, to know the ground of the Distemper that lies and lurketh within, and that no less in the behalf of Birds, than generally of all other Creatures: therefore I shall now endeavour briefly to gather and collect (according to my best skill and knowledg) in this Chapter what hath been scatteringly delivered in other places, touching the Infirmities and Diseases of all kind of Singing-Birds and Diseases thereof, for the benefit and instruction of such as would know the Diseases whereunto such birds as they delight in, and love to keep for their own pleasure, are subject to.

First,

First, Birds are subject, amongst other Diseases, unto *Impossthumes* ; which do happen unto them, and appear in the Head of a yellow Colour, as big as a Hemp-seed, sometimes as big as a Pea ; a Disease common'y haunting all birds, especially those which are of a hot Complexion.

The Second kind of Disease with which most Birds are troubled, is a subtile Disease called *Pthisis* ; for those birds that are troubled with this Disease, do most commonly swell in their Bodies, and you may perceive, if you make a narrow search their breast is beset with veins full of blood, though at that time the bird be very sharp and thin, and very lean upon the breast ; and those birds that are afflicted with this Disease, cannot well digest their Meat, but are subject to cast and overturn their Meat in their Stomach, so in a short time the Bird consumes away and dies.

The third sort of Disease is the *Gout*, which is very common to birds that have been kept long in the Cage, it causes a sore vexing pain in his Feet and Leggs, and causes them many times to forsake their Meat, by reason they can neither stir nor stand with any pleasure, but on the contrary a remaining Pain and vexation. This Disease is known by much roughness in the Legs and Feet, and swellings also, which are in the Feet, and Legs, and Knee, where most commonly it troubles them worst of all.

The fourth Disease is *difficulty of Breathing*, or hard and troublesome drawing of their Breath ; and this is known by the Hoarsness in their Throats, that they cannot utter the Tunes and Notes with any pleasure to themselves or Keepers : for if they do, they do it so harshly and imperfectly, that it is

as good they were silent. And furthermore, if you lay your Hand upon his Breast, or diligently mark him as he sits upon his Pearch, you shall easily perceive it by his extraordinary beating, as it were shewing himself that he is very much troubled with a very great oppression and difficulty of breathing; and if you lay your Hand upon his Breast, it shall beat against your Hand as if he had some live-thing in his Body: by all which Symptoms you may justly gather and conclude that he is most certainly infected with this Disease oftentimes, especially if it be a high-metled Bird, and he hear another sing, and is not able to come near him by reason of this Disease: he will cast forth lamentable noises, as if he were sensible of his own Diseases. This evidently declareth that he hath this Disease called *Asthma*, or shortness of Breath.

The 5th disease subject to Singing-Birds is *Blindness*, which oftentimes happens by extraordinary singing, each Bird striving to outvie the other in Song. This must be quickly helped upon the first appearance, or they will never be cured; and this Disease is at first perceived by the trickling of tears from their Eyes, and by certain Feathers that are about their Ears, which immediately do curl and crook by turning in again.

The 6th Disease is the *Falling-Sickness*, which is likewise incident unto very many Birds, whereof without diligent care & observation, they are seldom or never cured; for I could never find any other Remedy for it, but this; To keep the Birds which you bring up, (and especially *Bull-Finches*) from the heat of the Sun all the Summer long, and at the fall of the Leaf cut all the Nails of his Feet to the

very quick, and pull 5 or 6 of his Tail-Feathers, and when he mouts, besprinkle him with a little White-Wine and Water, and set him not in the Sun, but let him dry himself all times in the shade, and give once in a Week something to purge him.

The 7th Disease that Birds are subject to is the *Pip*, which may be known by the hardness of the end of their Tongue, and also by the sides of their bills: Your small-Birds that feed upon Seeds are very seldom subject to this Disease, but most commonly your *Throstles*, *Black-Birds*, and *Staires*, which feed upon soft Meat. I have also known your *Nightingales* to be troubled with it, that have been fed too much with Eggs boild hard. For the remedy of this (for the bird will never eat his Meat kindly, nor sing with any Stomach so long as he hath it) take the Bird in your Hand, and having opened his bill with a Needle, take that hardness off from the top of his Tongue, and the sides of his bill also: then give him the Seeds of Mellons, being bruised and steeped in pure Water, let him drink thereof three or four days; then when you perceive him to grow better, and to take delight to prune and peck himself, give him a little fine Loaf-Sugar, and put into his Water also. To keep your *Black-bird* and *Throstle* from this Distemper, give them once in a week a little painted fine-Coloured Snail, and lay him a stone in his Cage, and he will break him to pieces and eat him, and this will preserve those two birds from having a Fit.

The 8th is the Disease of the Rump, which is hard to be known, and no other way that I could ever find to be a better sign, than the bird growing Melancholy, as by surceasing and abstaining from

from singing : And the best Remedy is, to cut off that sharp part which lyes upon the top of the Rump, and give him some cleansing thing in his Meat, and refreshing thing in his Water, and he shall find great good by it. This is a grief which all birds are subject to, which are kept in Cages : for if they have their liberty and are abroad, every bird hath his certain Medicine for every Distemper he is subject to ; for I have observed it many times when *Linnets* feed most upon Chick-weed and plantain-Seeds, that they have come as dully to a Chalk-pit every morning, as they have gone to bed at night, and picked Chalk to bind them.

The last disease birds are subject to, is the Flux of the belly, which is known by their making of their dung thinner and more liquid than ordinary, and by often shaking and beating of their Tail, and keeping of it close together. The remedy is to cut the Feathers of his Tail, and also those which are about the Fundament ; anointing it with a little Capons-grease, and instead of Hemp-seeds or Rape-seeds, give him Mellon-Seeds, and red Beets-seeds bruised for the space of three or four days, till you perceive his Dang altered : And you must do this at first, otherwise it will not help when the bird is wasted and poor. But for those birds which eat not seeds, but Sheeps-heart or paste, give them a very hard roasted Egg, in such sort as you have been before directed.

The several Diseases which happen to every particular sort of Bird.

First, The Old *Nightingales* that are kept long in a Cage, are very subject (if not kept very clean) to the *Gout*, and if their Meat be not chopped very well, to the Convulsion of the Breast, with the Falling-Sickness and Giddiness in their Heads.

The *Wood-Lark* is very subject to be Lousie, and to be Melancholy, and troubled with the straitness of the Breast, which causes them to pine away in a short time if not helped, and then a Flux of the Belly, which if not immediately helped, it consumes them to nothing.

The *Skie-Lark* is also subject to all the same Infirmities of the *Wood-Lark*, except it be Loufiness.

The *Robin* is subject to the Cramp, to a great Giddiness in his Head, and to have the ends of his Nails perish, if he be not kept clean in his Cage; and will be very subject to the Falling-Sickness, if it be not prevented.

Almost all your birds that feed upon Flesh have almost all the same Distempers, except the *Black-bird* and *Throftle*, which seldom almost die, without it be for want of Meat or Water.

The *Canary-bird* hath many Diseases that he is subject to, as to the Giddiness in his Head, Falling-Sickness, Convulsion, and Oppression of Stomach and Breast, by reason of her excessive heat; and also very subject to a Flux in the Belly, which if not timely prevented, causes present death.

The *Linnet*, and all other Seed-birds are subject almost to the foregoing Distempers, but none are
apt

apt to the Falling-Sickness as the *Bull-Finch*. I think these Rules and Descriptions for Diseases are sufficient for any ordinary understanding.

To know how long birds shall live.

IF any Man be desirous to know how long these Singing-birds may live, let him understand that amongst Nightingales some live but one year, some three, some five, others unto eight, and till twelve; and sing very well, rather better and better, for the first eighth years, but after that they do a little decline by degrees, and from that time forward are not in such a height of perfection, but decline by little and little: They must have very good Masters and Keepers that do prolong their Lives three or four years; and where one is kept in a Cage till that Age, a hundred die; so its the carefulness of the Keeper preserves the Life of Birds. It hath been known that *Nightingales* have been kept and lived till fifteen years old, and have continued singing little or much for the most part of all the years; so that you may plainly perceive their Life depends much according to the good or ill management, or else according to the good Complexion of the bird.

The *Wood-Lark* seldom lives in a Cage above five years, by reason he is a tender bird, and subject to many Casualties, and we are ignorant of what they eat abroad to preserve themselves.

The *Robin* seldom lives above seven years, by reason he is so subject to the Falling-Sickness, and Cramp, and oppression of the Stomach.

The *Skie-Lark* is a very long-lived bird, and hardy also, and there is not much fear of his Death, if you provide him a Turf once in a Week, and give him Meat and Water plentifully. All sorts of Seed-birds live longer than any soft beaked birds, especially the *Canary* and *Linnet*, some having been Master of a *Canary* twenty years, and a *Linnet* also: But there are diseases amongst birds, as amongst all sorts of Cattle, which, if not timely prevented, make a very great slaughter.

Now I have done with all sorts of Singing-birds, I shall give you some short directions about some Whistling-birds: And those that have no song, that are not worth keeping for singing.

As first, The *Sterling*, which is most generally kept of all sorts of people, above any other birds for whistling; and the great fault almost in all people is, that they have them too fledg'd out of the Nest, and that makes them retain so much commonly of their own harsh notes: Therefore those that do intend to have them rare, and avoid their own squeeking notes, take them from the Old ones at two or three days old; do so in all birds that you intend shall learn to whistle or speak, and learn another birds song by hanging under him.

The next is the *Bull-Finch*, which hath no song of his own, nor whistle neither, but is a very apt bird to learn if taught by the Mouth.

The next is a *Black-bird*, which hath a kind of a rude Whistle, and will learn very well, if taken young enough out of the Nest; for most people to spare themselves a little more trouble than ordinary, desire to have them very fledg'd, and so they retain so much of the old birds Song, that most take
treble

treble the pains they need, and the others have them much better.

The *Robin Red-breast* is an excellent bird for the Whistle, and to speak also ; but this is the misery of most People, they breed so many together, that one spoils another : for a *Robin* is a hot-metled Bird, and must not be in the hearing of another ; therefore if you breed two, have them in several rooms, that they may not hear each other, and so consequently spoil one another.

The next for whistling of Seed-birds, is your *Canary-bird*, which will learn any thing almost, if taken very young out of the Nest, otherwise not ; for he is an exceeding hot-metled bird, and will run upon his own Song do what you can.

The next is the *Linnet*, which will learn almost any tune if not too long and too much variety ; for you must not teach any bird after the *Flaggell*, or your Mouth, that are too long or too much variety : Learn them one tune first, and then proceed to another, and keep him dark and still, out of the noise of other birds, for he is very apt to remember any Roguery above a Tune. Take this for a general rule for all birds, that the younger the birds be, the better they will prove, and answer your expectation and trouble for keeping them ten days extraordinary, when they are very young.

If what I have written be accepted, it may be a further encouragement for me to seek out more of the secrets of Nature; for of all things that were created, nothing praises and sets forth the Creator, amongst Animal Creatures, more than these poor

harmless birds. And it is a thing much to be observed, that of all the Animal Creatures that ever were made, none can learn, or by any means be taught to speak but the bird.

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